AMERICAN RAILROAD JOURNAL,

AND

IRON MANUFACTURER'S AND MINING GAZETTE.

ESTABLISHED 1831.

PUBLISHED WEEKLY, AT No. 48 SOUTH THIRD STREET, PHILADELPHIA, AT FIVE DOLLARS A YEAR, IN ADVANCE.

SECOND QUARTO SERIES, VOL. IV., No. 39] SATURDAY, SEPTEMBER 23, 1848 [WHOLE No. 650, VOL. XXI.

PRINCIPAL CONTENTS.

Boston and Montreal Railroad.....609
The Plough, the Loom and the Anvil.....609
India Rubber Car Springs.....609
Inclined Planes vs Locomotive Power.....609
Pennsylvania Coal Trade.....610
South Carolina Railroad.....610
English Railway Reports.....612
Iron Trade in the United States.....613
Soft and Hard Soap.....614
Diamond inot Coke, the Conversion of.....614
Artificial, or Indurated Stone.....614
The Iron Trade of the Union, etc.....615
Ocean Steam Navigation.—American Enterprise.....616
Gold Mines in Canada.....617

AMERICAN RAILROAD JOURNAL.

PUBLISHED AT 48 S. THIRD ST., PHILADELPHIA.

Saturday, September 23, 1848.

☞ REMOVAL.

The Office of this Journal is removed from the *Franklin House*, to No. 48 SOUTH THIRD STREET, *third door north* of the *Girard Bank*.

*** A *special request* is hereby made, to those to whom Circulars have been recently addressed, that they will respond promptly to them, as an important question—to us at least—is to be decided in accordance with the response given to the request made in those circulars.

RAILROAD IRON.

3000 TONS, ABOUT 60 LBS. PR lineal yard—deliverable early in the Spring, and of undoubted quality, can be contracted for at a low rate. For sale by

DAVIS, BROOKS & CO.,
68 Broad street.

New York, Sept. 16. 1848, 39tf

Also on hand—**1000** Tons best quality Rails.

Boston and Montreal Railroad.

The Belknap Gazette, of 26th ult., says that this "railroad is succeeding wonderfully well; we understand, though we don't know as we are authorised to tell of it, that its earnings for passengers alone amount to ten or twelve hundred dollars a week.—At this rate its whole earnings must be at the rate of eighty or ninety thousand dollars a year. This will do very well for a road costing only $450,000." And we learn from the same paper that a site and water power have been purchased in the village of Meredith Bridge, and the work of erecting buildings for the manufacture of railroad cars on an immense scale, has been commenced, and is going on with vigor. The buildings are to be three in number—one of 300 feet in length, and two of about 70 feet each. They are to be located on the bank of the river, and contemplate an investment of about $30,000.

Thus we see the influences of railroads on interior villages. They open the way for kinds of business which would never have been attempted without them.

The Plough, the Loom and the Anvil.

We noticed in our last number this valuable publication, but omitted to mention two very important facts—*where*, and *by whom*, it was published. The omission may not, however, be without its advantages, as it requires us to refer again to the subject, and thus again to call the attention of our readers to a work *deserving* of a nation-wide circulation, and to be in the hands of every *farmer*, *mechanic* and *manufacturer* in the *Union*.

"THE PLOUGH, THE LOOM AND THE ANVIL," is a *continuation* of that valuable periodical, the "FARMER'S LIBRARY," recently published in New York with such signal advantage to the agricultural community by *Greely & McElrath*, and edited by that veteran of the *agricultural* press, JOHN S. SKINNER—than whom, *few*, if any, in this country have done as much *for*, and, therefore, few are deserving as much *from*, the farmer. It is published in Philadelphia, at the Agricultural Rooms, in Washington Hall, South Third street—by JOHN S. SKINNER & SON, in monthly parts, at $3 a year, or *two* copies for $5, and *five* copies for $10, which brings it within the reach of every farmer and mechanic in the country.

We continue, in this number, the article on "The Iron Trade of the Union," which was commenced last week, and again ask for it an attentive perusal, as it will give a good idea of the character of the work from which it is taken.

That the editor will bring to his aid, in his labors, rich stores of practical information, may well be imagined by those who are familiar with his history, and who profited by his labors in the cause of agriculture, while editor of the "*American Farmer*," published in Baltimore more than a quarter of a century ago, as well as by those who have more recently been instructed by his efforts in the "Farmer's Library;" we hope, therefore, that he may derive from this enterprise a rich harvest in return for a long life of usefulness to his countrymen.

India Rubber Car Springs.

Since the publication of our last number we have had an opportunity of riding in two railroad cars—one upon the *Harlem* road, and one upon the *New Jersey* road, from Jersey City to New Brunswick—fitted up with *India rubber springs*, and must say that, for ease, and quietness, they exceed most other cars in which we ever rode.

The difference between these cars and others, on steel springs, in the same train, was manifest, especially when reading—and it appeared that, while in the cars with India rubber springs, the track was in much better *repair* than when in the other cars.—The apparent difference arose from the greater elasticity of the rubber springs, which continued to yield as long as additional weight was applied, and to return on passing any inequality, however small. Of their comparative durability we cannot speak—though we see no reason to doubt their durability.

This point will, however, be soon tested, as they are coming rapidly into use, on several roads.

For the American Railroad Journal.

Inclined Planes vs. Locomotive Power.

The question whether it is best to overcome a certain elevation by steep planes, or easy grades, is of great importance at this present moment. In this country, as well as in Europe, engineers and railroad companies are undecided which plan should be adopted. In the south of Europe, where one of the great continental lines is to cross a spur of the Tyrol Alps, the question is still in agitation, as to the two modes of effecting a passage.

Public opinion has of late years decided against planes, and those entrusted with the location of railroads, have in most cases abided by this decision. The profession, however, should not be guided by public sentiment, but rather lead it. I here propose to review this question generally, without entering into details.

When a mountain or any other elevation can be overcome by a graded line, without deviating much from the direct course, or without increasing the distance much, it should be done in preference to planes. But when a circuitous route has to be adopted in order to obtain the necessary distance required for

overcoming an elevation at a certain grade, it will be advisable in most cases to resort to inclined planes, provided such planes can be located in or near the direct course of the route. Saving of distance is the great object in the location of railroads. On several railroads in this country there are grades as high as 80 feet per mile, while the greater portion of the grades are less than 42 feet per mile. It is the practice sometimes to employ on such grades two locomotives in place of one. The expense of locomotive power is thereby increased in proportion. It it not to be denied, however, that such high gradients are very objectionable in high and elevated regions, where the adhesion of locomotives is much reduced in winter by rain and sleet, and where, on account of the accumulation of snow, it become very important to shorten a line as much as possible.

As regards the relative expense of locomotive and stationary power, it is generally admitted that the latter is most economical, in first cost as well as maintenance. Theoretically it is also true, that the amount of mechanical power, required to raise a weight to a certain height or to overcome an elevation either by light or steep grades, is the same in either case, leaving friction out of view. There are strong considerations in favor of inclined planes, where a great distance can be saved thereby. But a number of very serious objections are raised against planes, which I now propose to examine.

1. Supposed increase of expense in working the planes. Whether a plane of a certain height is more expensive in its working than a light grade, overcoming the same elevation, will depend upon the difference of distance between the two routes, consequently upon the difference of interest on first cost; upon the amount of transportation, and its nature; and mainly upon the construction and management of the plane.

The two first items are matters of comparative estimates, and can be ascertained. The first cost of a stationary engine is to be set against one or two locomotives, as the case may be; the amount of fuel to be burned in either case; repair of machinery and of road, etc. On a coal railroad, where the transportation is regular and heavy, the comparison will in all cases, be greatly in favor of planes. The more the business of another road approaches that of a coal road in bulk and regularity, the more favorable planes will appear.

The success of planes, however, will mainly depend upon their mechanical construction and management. I will refer to this after stating the other objections.

2. An increased danger is supposed to be connected with inclined planes; and

3. A great loss of time, one of the most serious objections on a passenger road.

The value of these objections have been greatly reduced by late improvements, which have been successfully applied in the construction as well as management of planes, and can be still further reduced by arrangements which will readily suggest themselves as simple and effective. As a proof how eminently successful planes are worked in an economical point of view, against graded lines, I need only point to the anthracite coal region in Pennsylvania. The planes on the Lehigh works, and of Carbondale railroad, may be cited as an instance.

By the successful introduction of wire ropes in place of hemp ropes, this item of expense has been reduced about one half, while the capacity of planes is thereby increased. Where a heavy trade is to be accommodated, the stationary power and ropes can be made strong enough to take up a whole train and locomotive, if necessary. Where the number of trains is limited, it will be good economy to divide a train. It is, however, a very important feature in the working of planes, that by means of wire ropes they can be adapted to nearly the same amount of business which can be none on a graded line. Passenger trains can in all cases be passed without dividing them, to avoid delay—and if properly managed, in less time than can be done on a graded line. The rapidity with which the planes on the Portage railroad, in Pennsylvania, are worked prove to some extent what can be done. The planes on the Lehigh and on the Carbondale railroad are worked still more expeditiously. It may be considered as established, that in point of time, planes, if properly constructed and managed, are more expeditious than graded lines overcoming the same elevation.

The last point to be considered is the supposed danger of planes. The causes of danger are, the breaking of a rope, and upsetting or breaking of cars. The first cause is greatly removed by the use of the wire rope, which will never give way suddenly without showing evident signs of failure long before. If any attention is paid to it no breaks can occur. But if it does occur, the danger of the cars running down is entirely avoided by the use of a safety car. These safeties can be constructed on different plans, which will all perfectly fulfil the object intended. Those in use on the Portage planes, are of a light construction, attached to the rope in front of descending, and rear of an ascending, train. Their action depends upon the adhesion of their soles upon the rails, when pressed down by the weight of a car broke loose and run upon it. If properly constructed, they will afford perfect safety. To insure this, however, and at the same to prevent cars from upsetting or running off the track, the latter should be laid with a good T or H rail, and provided with strong fender beams inside. Should an axle break, the body of the car will sink upon the fenders and slide down safe. A safety car of a very ingenious construction, which acts upon a rack rail, and affords perfect safety, is now in use on the Lehigh planes, which rise 1 in 4½, and where 17 empty coal cars are passed at one time. The system on which those planes are worked, has some admirable features, which might be advantageously applied to planes accommodating a similar business. By a proper construction of the driving sheaves, the slipping of the ropes can be altogether avoided so as to have an abundance of adhesion in all stages of weather. In this respect these planes have a decided advantage over locomotive levels, when the rails are slippery. This is an important consideration in the winter season, and in a mountainous region.

I should like to have the views of the profession in this country, on this subject, expressed through the Railroad Journal. AN ENGINEER.

☞ So should we like to hear from the profession on this subject.—[ED. R. R. J.]

English Railway Traffic.

"From our official returns," says the Chronicle, "it appears that the amount of traffic for the last week, on 4,045 miles of railway, was £231,828, thus accounted for: £132,796 for the conveyance of passengers only, £46,677 for the carriage of goods, and a remainder of £52,355 for passengers and goods together, not respectively apportioned; being an increase of £19,913 over the corresponding week o last year, when the mileage was 3,230. The average earnings per mile were £58, while in 1847 they were £65."

[From the Philadelphia "Commercial List."]

Pennsylvania Coal Trade for 1848.

From the Lehigh Mines.

The amount of coal shipped from the Lehigh mines during the week ending the 9th inst., and since the opening of the navigation, has been as follows:

	This week. Tons.	Total this year—tons.
By Lehigh company, Sept. 11.	7,456 15.	164,766 10
By Room Run ..... "	3,873 08..	82,975 07
By Hazleton.....	2,107 00..	64,407 00
By Beaver Meadow.....	2,566 06..	51,075 09
By Spring Mountain.....	2,550 03..	46,563 00
By Buck Mountain.....	1,042 07..	49,551 10
By Cranberry Mines.....	....	7,880 00
White Haven.....	753 14..	7,055 14
Sugar Loaf.....	43 18..	686 04
Total.....	20,393 12.	474,960 14

From the Schuylkill Mines.

The amount of coal forwarded by Reading railroad during the week ending the 14th inst., and since the 1st of January, has been as follows—

	Tons.
From Schuylkill Haven.....	8,552 00
" Pottsville	4,227 01
" Port Carbon.....	6,758 04
" Port Clinton.....	2,648 08
Total this week.....	22,185 13
Total this year.....	898,734 01

The amount of coal brought to market by the Schuylkill canal during the week ending the 14th inst., and since the opening of the canal, has been as follows:—

	Tons.
From Pottsville and Port Carbon.....	7,742 02
" Schuylkill Haven.....	4,065 13
" Port Clinton.....	947 14
Total this week.....	12,755 09
Total this year.....	298,567 15

Recapitulation.—Total Shipments this Season.

By Lehigh companies.....	474,960 14
By Reading railroad.....	898,734 01
By Schuylkill canal.....	298,567 15
Total	1,672,262 10

South Carolina Railroad.

Their Condition and Prospects

Continued from page 597.

The Camden branch above alluded to, and condemned, is laid, we understand, in the following manner, viz: a rail of 51 lbs. to the yard, upon crossties, 5 x 12 inches, 8 feet long, placed 2½ feet from centre to centre—without mud sills. This would be considered a very good road in most places, though it would be *smoother* if laid upon mud sills.

The committee refer also to other matters of which we cannot judge so well, at a distance—we therefore omit them, and pass to their general remarks, in which they say:

"There are many other subjects connected with the road and its administration which have occupied the attention of your committee, and to which the want of time and the limits of a report will not permit them to do more than briefly to advert, and to claim for them the consideration of the stockholders. Among these are the systematic division and arrangement of duties appertaining to the several departments, a proper supervision of them, and a system of accountability for the property and materials which are placed under charge of the different persons engaged in the company's service. The real estate of the corporation, not necessary for immediate uses, or not productive of revenue, should at once be disposed of, as it is alike foreign to the objects of the charter, and the interests of the com-

pany; that any portion of their capital should be thus invested.

"To the expenses of the road also, it is particularly desirable that the company should give special attention. The committee have ascertained that there are upwards of seven hundred and fifty persons in the constant employment of the company, and that the sum annually paid for personal service only, varies between two hundred and twenty five thousand and two hundred and thirty thousand dollars. How far this amount of labor is absolutely required, or whether any portion of it might be dispensed with by the exercise of a judicious economy and an efficient supervision, are subjects upon which we do not feel qualified at this time to pronounce a decided opinion. We are satisfied that the adoption of our suggestion in relation to the depot will go very far towards effecting a reduction in this item of expenditure; but the subject should be recommended to the special consideration of the directors, with a request to diminish the expenses in this department, so far as may be consistent with the exigencies of the service.

"With respect to the officers of the road, your committee will take this occasion to say that while they would urge the strict and regular discharge of their duties, they are of opinion that no reduction should be made in the salaries paid by the company.

"There is one subject connected with the income of the road which we think requires some regulation. The company is obliged, at certain points, to enter into competition with other modes of conveyance, and even with other roads. To secure business, it frequently becomes necessary to lessen the rates of transportation from these points.—We think the president should be empowered to make such arrangements, without at the same time being compelled to alter rates at other points where the same necessity does not exist. In the one case the business may be lost to the road entirely unless the reduction is made; in the other, the parties are only required to pay an ordinary and reasonable compensation for services rendered.

"It seems to your committee that the number of directors is much larger than is either necessary or useful. It is a fact well understood that the feeling of responsibility is weakened by being divided among many, while it is augmented by concentration in the hands of a few. There is also greater difficulty in getting them together, and when assembled, there is far less of harmony in their deliberations and efficiency in their action.

"The committee have embodied their views in a condensed form, in relation to this and other subjects, in a series of resolutions, which will be submitted to your consideration.

"In conclusion, the committee take great pleasure in acknowledging their obligations to the officers of the company, for the facilities afforded them in the progress of this investigation. They feel much gratified also in testifying to the ability and fidelity with which the business of transportation, in all its various departments is conducted. The mail and passenger trains have been carried with a certainty and regularity not surpassed by any road in the United States, while the freight trains have been forwarded with promptitude and despatch. Casualties on the road, either to the persons or machinery engaged upon it, have been rare, and we believe that since its establishment in 1830, a period of 18 years, of the many thousands of passengers who have travelled over it, but few have sustained personal injury, and not a single instance has occurred resulting in the loss of life. In this respect it may safely challenge comparison with any road, either in this country or in Europe.

"In coming to a close, the committee take occasion to state, that they terminate their labors with undiminished confidence in the success of the road, and in full assurance that it will prove a profitable investment to its stockholders. Its location as one of the main trunks connecting the Atlantic seaboard with the internal communications of the southwest, the new routes now in projection in our own and the neighboring States, the constantly increasing income which has already been realised, surpassing our anticipations, all tend to confirm the impression that there is no description of property within our limits which is more intrinsically valuable, or that will more certainly afford an abundant remuneration.

All which is respectfully submitted.

Signed:—Benj. F. Pepoon, Edw. Carew, J. M. Dwight, Thomas Lehre.

The foregoing report was made by a majority of the committee—while the minority made a distinct report, from which we make the following extracts. The minority see some things through different glasses from the majority, and we are inclined to the opinion that they know *something* of the *practical* operations of the company. It is an easy matter for many excellent people to find a great deal of fault with what they do not understand. We have known men—very excellent men—who had been brought up in a *counting house*, or in a *broker's office*—placed in charge of a railroad, of which they knew nothing—except the price of its stock—where they assumed to direct in minute details, instead of following the advice of long experienced and practical men.

Of the detail, or general management, of this road we know very little, but we *do* know something of some of its officers, and are *much* mistaken if they are not able, intelligent and efficient in their respective stations, and so seem to think the minority.—They say:

"The undersigned, a minority of the committee appointed at the last meeting of the stockholders to examine into the general condition of the affairs of the company, respectfully submit the following as the result of their labors:

"The South Carolina rail-road, it must be borne in mind, was built in the infancy of railroads. Its original construction was defective, and it would be unfair and unsatisfactory to institute a comparison between a road thus built and one constructed in the present advanced state of improvement and knowledge in railroad matters.

"The undersigned deem it unnecessary to go into an argument to prove that the expense of keeping in repair a road originally constructed for engines of light weight and low speed, must be greatly increased by substituting heavy engines and high speed. Other difficulties in the economical management of the road, resulting from the same cause, might be pointed out; but as they desire to condense their report as much as possible, they refrain from alluding to them. Keeping then the above fact in mind, the undersigned do not hesitate to assert, (and their opinion rests on no little personal observation and travel on other roads) that the present general condition of the South Carolina railroad will compare most favorably with nine-tenths of the roads of this country. In all that concerns the comfort and safety of the traveller; in the regularity of its trips: in freedom from accidents and detention: in the neatness and convenience of the cars: in the politeness and attention of its officers: it may fearlessly invite comparison with the often quoted and greatly lauded roads of the north; and as mail carrier it stands, and has been ranked by the postmaster general in the first class.

"That in a road of upwards of 200 miles, there should be occasional defects, must naturally be expected. Timber will rot, iron wear, screws and wedges work loose, ditches fill up, and the roadbed in certain places will sink. These are matters against which human foresight and skill cannot effectually guard. While, therefore, so far as the actual condition of the road is concerned, they are gratified in being able to state that there is no ground to charge upon the present government of it gross negligence or a want of proper care and concern for the true interests of the company, they would still recommend increased vigilance and energy on the part of those entrusted with its management, as the most effectual remedy for such deficiencies as do exist, and the surest means of enhancing the value of its stock. From this general approbation of the condition of the road, the undersigned except the trestle work in the Congaree swamp, which they think was originally badly built, and is at present rapidly decaying. The committee are now renewing entirely this work, and, as it seems, of solid materials, and on a substantial plan.—The number of officers, agents, laborers, etc., in the employment of the company is large, and to one unacquainted with the extent and ramifications of its business would seem to be large beyond all reason; but from all the information obtained, the undersigned are not prepared to say that the number is greater than the actual business of the company demands. The services required of these officers are arduous, constant and highly responsible. Their compensation is fair and reasonable, and the stockholders have just ground of congratulation that they have been able to secure the services of a corps of officers whose promptness, efficiency, ability, and respectability it is confidently believed cannot be surpassed by any similar body of men.

"The question now naturally suggests itself, if the general condition of the road and character of its officers are such as we have represented, why has the stock depreciated? and why was there a failure to declare a di-

vidend? Without undertaking to argue these points at length, it is sufficient to say, that during the same period, all stocks and all property have depreciated more or less, growing out of a state of things which no foresight could have anticipated, and no skill have averted. The failure to pay a dividend no doubt increased the depreciation of this stock, but it is quite evident that the payment of one could not have prevented it. The non payment of a dividend, though it may have disappointed the expectations of the stockholders, is no just cause of alarm as to the value of the stock, and is chargeable neither to a want of prudence nor skill on the part if the government of the road. The expenditure on the Camden branch, and the large outlay for additional car and motive power, *both* under the express instructions of the stockholders, absorbed the funds of the company, not *wastefully, but for improvement, increasing the value of its property;* and when to this is added the fact that the produce of the country was not sent forward as early as usual, it seems to the undersigned there can be no difficulty in understanding why there was no dividend. In thus being able, after a most thorough and searching investigation, to testify in favor of the general good condition of the road, and the ability and fidelity of the officers of the company, the undersigned would not be understood as contending that they saw nothing to disapprove either in its management or the policy adopted by the direction."

In relation to the tariff of freight and rates of fare they say:

"The tariff of freight and the rate of passage on the road are, in our opinion, too low, and a just regard for the interest of the company requires that they should be raised.—As this is a matter which can be safely determined only by experience, they would simply remark that the true tariff at all times whether high or low, is such a one as will insure the greatest revenue."

It is true that the rates of freight are *comparatively* low—as will be seen in the annexed statement—but not so in relation to fares, which are nearly *five* cts., or 4·96 per mile.

The statement is from the Railroad Journal, of July 22d, and is as follows, viz:

"South Carolina, 136 miles—iron, 25 cts. per 100 lbs.; corn and grain, 7 cts. per bushel; sugar, salt, butter, 25 cts. per 100 lbs.; light, bulky merchandise, 8 cts. per cubic foot, through; horses, each $8; 4-wheeled carriages, $10, through; passenger fare, 1st class, $6 75, or 4·96 cts. per mile."

The charges through, or for 136 miles, would be low, in the *south*, for one hundred miles—and we think the South Carolina and Georgia roads would be fully justified in raising their freights.

In relation to the location of a permanent depot, there is no difference of opinion in the committee, which *we* regret—as we hoped to find friends to the water location in some of its members.

Not so, however, in relation to the inclined plane—as they think it will answer quite well, if well managed. They say:

"The inclined plane at Aiken has long been a subject of discussion among the stockholders, and where men of reputed sagacity, and greater experience, have at one period advocated and subsequently condemned it, the undersigned submit their views on the subject with great diffidence. As a general remark, inclined planes are objectionable, and in the construction of roads should be avoided, when this can be done at a reasonable cost. If this were a question of original construction, it would be one of easy solution. This, unfortunately, is not the case.

"From the best lights afforded, the undersigned are of opinion, that this evil, its difficulties, delays and dangers, have been vastly exaggerated. Its past history proves, beyond all question, that it has been able to do all the business that has offered—has occasioned no losses of the mail, and involved no sacrifice of life. It is the opinion of experienced engineers that this plane, with heavier locomotives, can be made to do even ten times the business it has ever done. Mr. Tupper, the former able and esteemed president of this company, while he condemned inclined planes generally, gave it as his opinion that turning this plane would not save one dollar of expense to the company. When to all this is added, the very material fact that the company have not the means, and from the signs of the times will not be able soon to obtain them, to accomplish the objects even if most imperiously demanded, it seems to the undersigned there is an end of the argument. At a more convenient period, and under the heavy pressure and great profits of that large increase of travel and great accession of business to the city of Charleston, which the sanguine so confidently predict, and the more cautious ardently hope may be in store for us, the subject can be more safely approached, and more easily disposed of."

They also say—and *we fully coincide with them*—that,

"In view of the want of confidence in the management of the road which prevails to some extent, and the alarm and clamor excited against it, for which the undersigned think there is no just ground, they cannot close this report without the expression of their abiding conviction, notwithstanding present troubles, and in spite of all efforts to destroy public confidence and depreciate its stock, that a bright prospect is unfolding itself; and the day is not distant when its stock will be the most valuable and popular in the state. Its location making it inevitably an important link in the great thoroughfare of our amazingly growing continent—its numerous feeders already projected, and sure of completion, penetrating portions of our country shut out from us by nature, and destined to introduce to us a population unknown, and pour into our cherished city a trade as various as it is boundless, constitute advantages in its favor which cannot be too highly estimated, and should secure for it the unshaken confidence and unwavering support of every true hearted Carolinian."

We thus close our extracts from the proceedings of the committee, which gives something of an insight into the condition of the road, and into the disagreements among the shareholders; but to us, at a distance, who are not familiar with the secret springs of action, it is not so easy to understand the *cause* of these disagreements.

In the report of the minority of the committee, as in that of the majority, we are disappointed in relation to the permanent depot. They barely refer to the "desire, on the part of some, to locate the terminus of the road on the water"—and then they say "From all the facts and information obtained, the undersigned are of opinion that the Charleston depot should be located on the present, or adjacent squares." etc. We must therefore, of course, yield the point—though it is possible that we, who know very little of the local and personal influences which operate on the matter, are quite as sure that we are right in our views, as those who know all about it; and therefore, as we are convinced—or yield the point because we must—*against our judgment*—we shall be very likely to return again hereafter to our old stamping ground, and renew the contest.

Having given the leading views of both the majority and minority of the committee, we shall also give, in another number, a few extracts from the president's reply to the committee, in the form of a *report* to the directors—dated 28th of May last. It is drawn up with great ability, and shows how much the company would lose by a change of men.

English Railway Reports.

The season for the semi-annual reports of the English railways has again come round, and we make a short extract from that of the London and North Western, to show the extent of the company's operations, and the demands made upon their earnings, for parish rates and taxes, duty on passengers, police expenses, in addition to the legitimate working expenses.

The gross earnings of the company for the six months ending 30th June, were £1,034,007 11 1—of which £20,930 5 5 was for transporting the *mails*.

The parish rates and taxes were.....	£28,346 3 6
Duty on passengers.....	24,380 6 2
Police charges.....	19,649 16 6
Making.....	72,376 6 2

for these three items—which is much of a piece with the usual charges for "right of way," "legal expenses," and "charges for printing." After disposing of the cost of construction, the report says:

Under the second head of expenditures is comprised a further charge for working stock, required for an extension of traffic on the Lancaster and Carlisle railway, and for working the Chester and Holyhead railway, which the directors have undertaken for a period of years. As this item may be liable to misconstruction, the following table of the charge for stock since the opening of the various lines now consolidated in the London and N. Western railway, with the progressive increase of mileage, is submitted:

	Total charge. £	Total milage worked.	Per mile. £
1840.....	602,999	233¼	2,579
1841.....	628,700	260¼	2,411
1842.....	685,916	260¼	2,630
1843.....	687,516	285¼	2,406
1844.....	708,959	285¼	2,481
1845.....	805,691	303¼	2,656
1846.....	1,135,987	502¼	2,259
1847.....	1,462,900	555	2,635
1848.....	1,674,668	633¼	2,646

It will thus be seen, that while the demands on the service, in consequence of increased accommodation, and reduced charges, are much greater than heretofore, the ratio of the moving stock to the mileage worked remains

about the same, and continues to be very much less than that of other railway companies.—The proprietors will recollect that in the last half yearly account, a sum of £30,400 was deducted from the company's profits, under the head of depreciation of stock. Further investigation into the condition and value of the stock having convinced the directors that this additional charge on the revenue to the 31st of December last, was not at that date required, and would certainly not have been made had they then been as fully aware of its actual state as they now are, have retransferred the amount to the reserved fund. The partial opening of the Chester and Holyhead has fully equalled the expectations of the promoters; and now that the journey between London and Dublin is reduced to about thirteen hours, the directors look for that increase of traffic which always follows facilities of travelling. The traffic on the Lancaster and Carlisle is steadily increasing, and there appears every reason for anticipating an improved dividend on the shares held by this company in that undertaking.

From the statement of the half years' accounts, it will be seen that the net proceeds after deducting £11,715 4 11, for replacement of locomotive engines and carriages, is, £491,272 3 4

To which must be added the balance carried forward from last year, £50,321 10, and 30,-462 18 deducted in error, 80,784 3 0

572,056 11 4

The directors recommend a further allowance for the renewal of rails in the last half year 6,000 0 0

Making a disposable sum of £566,056 11 4

Of this sum, they recommend a dividend of £3 10 per ct. for the six months, amounting to £521.717 19 8, and leaving a balance of £44,338 11 8 to be carried to the next half years account The directors do not contemplate making any other call in the next half year than on the Manchester and Birmingham £10 shares C, unless the state of the money market should require it. The lamented death of Mr. R. Earle, one of the company's auditors, makes it necessary that the proprietors should, at the present meeting, appoint another in his place. The directors cannot conclude the present report without declaring their conviction, after mature consideration of the manifold difficulties with which the company, during the last eighteen months have had to struggle, and the practical effect which must result from their avowed determination, sanctioned by the proprietors, not to contract any new engagements, which may become chargeable on their existing revenue, that there is nothing in the position of the company, at the present time, to shake the confidence of proprietors in the stability of the concern or to create anxiety as to their future prospects.

The statement of the capital account shows a total of expenditure to the 30th ult. (less Carlisle line.) to be £22,835,119 19 3: the total receipts of stock calls, in advance and loans, were £23,231,245 10 10; leaving a balance in hand of £396,125 11 7.

Revenue Acc't for half year ending June 30th.

RECEIPTS.

Traffic, viz: passengers	£583,279 11 10	
Mails	20,930 5 5	
Horses, carriages and dogs	16,859 17 4	
Parcels	49,037 12 0	
Merchandise, gross receipts, less £77, 562 3 10, expenses of collection & delivery	291,762 14 8	
Live stock	22,084 12 9	
Coal	25,952 13 2	
Total traffic		1,009,907 7 3
Interest on cash balances		7,752 10 9
Rents of land and buildings, less £3,-089 19 2, for repairs, sundries and chief rents		7,652 17 5
Dividend from Lancaster & Carlisle.		8,694 15 8
		1,034,007 11 1

EXPENDITURE.

Maintenance of way and stations	41,980 12 2	
Locomotive power— wages of engineers, enginemen, firemen, repairs, cost of materials and coke	126,626 6 6	
Coach traffic charges—salaries, wages, stationery, tickets and carriage repairs	86,104 3 4	
Police charges	19,649 16 6	
Merchandise traffic charges—salaries, wages, stationery, wagon repairs & sundries	75,022 18 8	
Stores department charges	1,182 17 11	
Compensation for accidents and loses	5,242 18 4	
General charges, including secretary, accountants, audit and manager's department, clearing house, and other expenses not classed	15,593 5 9	
Schools at Wolverton and Crewe	923 16 2	
Total working charges	372,401 15 4	
Parish rates and taxes	28,346 3 6	
Duty on passenger traffic	24,380 6 2	
Loss on North Union lease	8,395 6 1	
Interest on loans charged against revenue	109,211 16 8	
Balance carried down	491,272 3 4	
		1,034,007 11 1

Balance brought down... 491,272 3 4
Less for renewal of rails. 6,000 0 0
485,272 3 4

From this it appears that this company divides only at the rate of 7 per cent. this year, instead of 8 per cent. as in 1847. This is not however, we infer, so much from an actual decrease of business, as from the extension of their lines into regions where the business is not fully developed, *or* is in the hands of those who have heretofore managed it. Railroads cannot *at once* obtain all the existing business of a line, nor develope, in a year, all the resources of a region; but they will accomplish astonishing results when well managed, and therefore we have no fear in relation to the success of this great company, if they do not attempt to control *too much territory.*

Iron Trade in the United States.

It is a, not uncommon, saying that if you would get the news of your neighborhood, you must go from home. And it is somewhat so with us in relation to the following account of a new process of making iron in the United States, which was published in the Birmingham, English, Journal, from its American correspondent. We have heard of this process, but have never been in possession of a full and accurate description, and therefore have never alluded to it in the Journal—but shall endeavor to become better acquainted with it.

The Iron Trade in America.—The following table exhibits the exports of iron from Gt. Britain to the United States for the two last years; it will be perceived that they have increased very much, particularly in the finer descriptions of iron. The shipments from Wales direct have been much in advance of any former years.

Export of Iron from Liverpool in 1846–7, to New York, Boston and Philadelphia.

	Rails. Tons.	Bars. Tons.	Hoops & sheets.
To New York in 1846	6440	7026	901
" 1847	6642	20546	4855
Increase	202	13520	3954
To Boston, in 1846	6030	4114	623
" 1847	5843	13583	1670
Increase		9469	1047
To Philadelphia, in 1846	44	1667	162
" 1847	150	3414	670
Increase	106	1747	508

The extensive iron mines in Alabama are beginning to attract the attention of capitalists in that State. W. W. Wood, Esq., a gentleman who has been enquiring into the different processes of iron manufacture in the north, advises his friends in Alabama to proceed immediately with the erection of works. Speaking of iron making in these regions, he says:

"By a new process, I saw in operation, an iron, of the very best quality, is made directly from the ore, at the rate of 1 ton of 2240 lb. per 24 hours, at a cost of $16 per ton, and a consumption of from 170 to 200 bushels of charcoal—the cost of which is included in the expense of producing the 1 ton. Expense of working a single forge, $10 per day, and the machinery requisite for a single forge would be sufficient to keep six forges in operation—consisting of one direct action steam hammer, one steam engine, and blast cylinders; and if requisite to make other iron, tilted bars or blooms, then a train of small rolls will be required. One bloomer can attend six forges, as well as one; therefore, to work a single forge would be attended with no economy."

I do not know what is the "new process" to which he alludes, but think it probable that it is in use in your own districts, whence it has been introduced here. Mr. Wood gives it as the opinion of the oldest iron masters, who went to witness the new invention in operation, that it is destined to effect a complete revolution in iron making; by it, they say, the best quality of wrought iron is made directly from the ore, much cheaper than the pig iron, from which the wrought iron is subsequently made, when carried on to any extent, at a loss of 20 per cent in the weight of the pig. The cost of converting the cast pigs into wrought bars is $20 per ton. In his report, Mr. Wood further says:

"A furnace, or furnaces, may be worked advantageously 255 days in the year, excluding Sundays, and allowing 45 days for repairs, contingencies, etc., say four furnaces in operation to produce 3 tons of iron per day,

which would allow for each furnace per day 1680 lbs. of iron, being 560 lbs. less than what is estimated can be turned out per furnace. Iron produced, 3 tons × 255 working days, 765 tons—worth in Boston or N. York $60 per ton (765 × 60,) $45,900

Professor Banard informs me it will cost $80 40 per ton to deliver the iron on wharf at Tuscaloosa, from the ore beds, or 3 8 cents per lb.—first transportation,	$6,426
Transportation from Tuscaloosa to Mobile of 765 tons at $3 per ton,	3,295
From Mobile to the north, $3 per ton,	2,295
To deliver 765 tons from the works in Alabama, in N. York or Boston,	1,106
Cost of making 765 tons of iron, say $20 per ton,	15,300
Entire cost of transportation to a northern market, including the cost of making it, which is an excess of $4 per ton, at $20,	26,316
Leaving a net profit of,	$19,584

In this calculation, he has reckoned the value of the iron at the lowest figure, $60.—The best, the Low Moor iron of Scotland, used for manufacturing locomotives, costs 120 dollars in Boston; the next best, the hammer iron, made from ore at Salesburgh, Ct., costs 100 dollars; and he does not fear that the quality of the Alabama ore would ensure their iron a price equal to the last.

Soft and Hard Soap.

The editor of the London Mining Journal uses both kinds of "soap," in his remarks upon this country—and they may be equally just.

"It would be no very easy task to lay one's hand on two countries of such unbounded opulency in mineral treasures, and yet have contributed so little to the world's stock of that particular description of wealth, as the United States in the new Continent, and Spain in the old. We excuse our brethren by genalogy, on the western side of the Atlantic, for not having done more in this particular direction—they have had plenty of work of another kind to occupy their attention. It is something to have founded a prosperous commonwealth in the wilderness—to have raised with their own hands, and by their own exertions, a fabric of liberty and commerce equal to anything the world has seen in her ancient, her middle, or her modern ages. As to Spain below the Pyrenees, the kingdoms of Castile and Leon, she has done next to nothing, compared with what she might have done, from shere supineness and inattention. In respect to *mines* and *minerals*, her wealth is to this day unprobed—her resources are unassayed; and until civil dissentions are exchanged for civil concord, and the intrigues of cabinets have given place to the arts of commerce—until, in fact, internal peace and the authority of law have received a more perfect organization—neither her mines, nor her vineyards, nor any other of her prognant elements of prosperity will yield to Spain a half of her wealth, or bestow on her people a half of therir teeming national advantages. But we do regard Spain in Europe, and some of the states of the American Union, as among the most promising areas in the world for the production of mining wealth, and the progrees of mining activity—of course we speak of the U. States, as they have been known to Europe for about the last century, and without reference to their recent raid in Mexico. They are alike therefore, in some of the elements of their material condition; but in the features, political and moral, of the two communities, there is the greatest possible dissimilarity. The press of Madrid bestows a just eulogy on the honor, the industry, and the general success of the British government and people; but the press of our Ameriaan descendants is redolent of the choicest terms of contumely, as applied to this nation. It seems always most happy when most calumniating those from whom the people of the states trace their natural origin, and to whom they are indebted for the free spirit of their institutions. Ingratitude is a vice which all the world over, and in every age, has been charged against republics; and the ingratitude of our children of the new continent, confirms the truth of the imputation."

Diamond into Coke--the Conversion of.

In the course of last year, says the editor of the Mining Journal, Mr. Jacquelnin succeeded in converting diamond into a substance possessing the appearance, physical character, and electrical properities of coke by the following process;—Having attached a piece of hard gas retort carbon to the positive wire of Bunsen's battery of 100 elements, he placed on it a small piece of diamond. He then armed the negative wire with a cone of the same carbon, and, by dexterous manipulation, enveloped the diamond with electric flame. After a short interval, the diamond underwent a sort of ebullition, became disintegrated, softned, and was actually coke. (*Comptes Rendus*, June 14, 1847; *An de Chimie*, tom. xx., p. 459.) On this experiment Prof. Faraday made the following observation, in a paper on the subject at the Royal Society:—

1. *As to the property possessed by certain substances to assume totally different forms without undergoing any chemical change.*—Prof. Faraday adverted to the case of sulphur, which becomes brittle when suddenly cooled from its first state of fusion, but is soft and pliable when similarly cooled from its second state of fusion.

2. *As to the source of heat employed.*—Prof. Faraday dwelt on the beauty and power of the voltaic arc as a furnace. Showing by experiment that diamond could be burned into carbonic acid gas by means of a current of oxygen gas directed on it when highly heated, the professor stated that neither this heat nor any short of that of the voltaic battery, except that of the solar lens, was sufficient to convert diamond into coke. The fusion of rock crystal by a current of oxygen sent through an ether fame was noticed; and it was shown that this powerfull heat was inferior in intensity to that of the battery.

3. *The condition of the diamond when thus converted into coke.*—It becomes absolutely lighter. The specific gravity of ordinary diamond is 3.368; when changed into coke its specific gravity is 2 679. It loses its insulating power. Prof. Faraday here alluded to some experiments by M. Karsten (*Archives des Sciences*, 1847), proving that certain compound bodies where conductors or not according their preperation. He stated that this was the only case analogous to carbon.

4. *As to the philosophy of the change of the diamond's structure.*—Referting to M. Gassiot's demonstration that the heat is greatest at the posotive pole of the battery, Prof Faraday suggested the possibility that the particles of diamond might, under the influence of the intense heat, tend to form vapour having a sensible and assisting expansive force, and that in there axial position as regarded the enveloping discharge they might assume a state having relation to a dia-magnetic condition. He requested to be understood, however, as offering this idea merely as a philosophical conjecture. Finally, he referred to Craham's supposition, that the difierence between diamond and coke might depend on their known difierence of specific heat.

Artificial, or Indurated Stone.

A process has been discovered, according to the following extract from the London Mining Journal of July 22d, by which a soft and useless stone becomes hard and valuable. This seems *almost* too much to believe, but we have learned to think *twice* before we express doubts in relation to almost anything; we therefore will not doubt these statements, yet will not promise to believe them without more evidence. The writer in the Journal says, in relation to "Hutchinson's Indurated Stone"—

We have much pleasure in observing, that this valuable material is quietly, but surely, forcing its way in public estimation. The principal materials at present operated upon are the beautiful freestone at Caen, in Normandy, and a worthless sandstone, which crumbles between the fingers, at Calverley Quarry, Tonbridge, Kent, but which, as we have before stated in our notices on the subject, is rendered as hard and durable as granite. The patentee, to whose long preserving efforts must be ascribed the perfection to which the processes are brought, still in the most handsome manner publicly declines the merit due to the original invention. It was first discovered by a M. Charles Le Goux, of Bayeux, Normandy, and of whom Mr. Hutchison purchased the *brevet d invention* which had been taken out for France, and has since taken out patents for this and other countries. We think the merits of the substance produced are now pretty generally becoming known to the public; and as time continues to give additional proofs of its economy, and the perfect indistructibility of the materials—and as, probably, still further improvements may be made in colouring, during the indurating process, rendering it more applicable than at present to the finer works of art—it is likely to become one of the most valuable discoveries of this extraordinarily inventive age. As we have so often fully discribed the processes, and their effects it would be superfluous for us, on this

occasion, to repeat them; to show, however, that our favourable opinions are fully borne out by others, we give the following from the *Sussex Express*.

Having heard much of Mr. Hutchison's method of indurating stone, we were induced to visit his works at Jack Wood's Spring, on Thursday last. We had been prepared to expect to find that the stone, which had been subject to the process of induration, had been completely metamorphosed; but we must confess we were not prepared to see the soft stone at Jack Wood's, which, in its natural state, crumbles to powder with the slightest pressure between the thumb and finger, rendered as hard as granite or marble. Several pieces that were shown us were close imitations of various kinds of the most beautifully grained and black marble; and, as by this process it is rendered absolutely imperishable from atmospheric action, and capable of receiving the highest polish, we can, without the slightest hesitation, accord to Mr. Hutchison the merit of making one of the most extraordinary discoveries of the present age. The purposes to which this patent can be applied are innumerable. The softest stone, chalk, wood, paper &c.. can be rendered as hard as metal, so that the most useless rubbish can be turned to the most valuable purposes, and, to crown all, the cost much lower than any other that has hitherto been introduced for purposes to which it can be applied. Of couse, in the space of a newspaper paragraph, it would be impossible to enumerate a tithe of the benefits this discovery is likely to confer on society; but, from the information we gathered while inspecting the works. we consider it highly deserving the attention of engineers, architects, sculptors, builders, and even to surveyors of highways. By an advertisement, which appears in another part of this journal: we perceive that Mr. Hutcinson is open to grant licenses to indurate for districts, or entire countries.

From 'The Plough, the Loom and the Anvil,' for September, 1848, vol. I., No 3.

The Iron Trade of the Union, and its Influence upon the Interests of the Farmer and Planter.

Continued from page 595.

So entirely a gain is the labor applied to the fashioning of the raw materials yielded by the earth, that we feel perfectly safe in asserting that were all the coal and iron mines, the furnaces and rolling-mills, the cotton and woollen factories, the paper mills and the printing offices, closed, and the whole labor therein employed turned to the production of food, the quantity of food produced would in a short time be less than it is now, for the reason that the labor which is now employed in producing tons of potatoes and turnips, hay, and milk, and veal, and strawberries, and cabbages, would be then turned to the production of commodities of which the earth yields by bushels, and which therefore bear to be exported. If we wish evidence of this, we may find it in the fact that New England, dense as is her population, can yet export hay, while South Carolina, sparsely peopled as she is, and with millions of acres fitted to yield the finest hay, imports it from the north. When that State shall obtain consumers on the ground for her rice and her cotton, she too may export hay, because she will then have railroads upon which it may be carried.

Were the whole labor-power of the Union turned to the production of food, and cotton, and tobacco, and hemp, the product of agriculture would be less than it is now, and for the simple reason that the process of exhaustion would be more rapid. For evidence of this, we need look no further than Virginia or South Carolina; but if further evidence be required, it may be found in the impoverished state of every country that has made no market on the land for the products of the land. If this be so, it must be evident that every increase in the number of consumers tends to increase the product of agriculture to an extent exceeding the demands of those consumers, and that the gain to the community is more than the whole amount of their consumption.

Whenever the consumers of Poland, employed in fashioning the products of the earth, shall become as numerous as are now those of England, or New England, the great machine will yield by tons instead of bushels, and the producers will grow rich; and whenever the consumers of New England, or of the United States at large, shall become as few as are now those of Poland, the earth will yield by bushels instead of tons, and the producers will become as poor as those of Poland, and may then enter fairly into competetion with them for the supply of the English markets.

It will be asked: if all this vast gain—and vast it is—results from thus applying labor to the work of conversion, bringing the consumer to the side of the producer, why is it that protection is required for enabling the latter to induce the former to take his place by his side? The reason is to be found in the unceasing changes resulting from the unsound and unnatural state of things existing in other parts of the world. For the last thirty years the average price of merchant bar iron in England is stated to have been £8, 9*s*. 3*d*., or about $41 per ton. Within that time it has been up to £13, and down to £4, 15*s*., thus fluctuating between $62 40 and $23 80. In 1843, only four years since, the latter was the price. Last year, it was £8, 10*s*., or $40 80. Now, it is about £6, or $28 80.

What now, we would ask the farmer or planter to inquire, is the consequence of this? Let him look around and he will find the answer. He will see that almost as surely as a furnace or a rolling-mill is built, its owner is ruined by charges over which he has, and can have, no control. Judging from the past, all that such a man can hope for is that he may have a year or two of high prices, to enable him to provide against succeeding years of low ones, when he would otherwise be ruined. He is buying a lottery ticket, and he must trust to fortune to determine whether it shall be a blank or a prize. Last year, furnaces and rolling-mills where built everywhere, and the manufacture of iron made such progress as to warrant the belief that a very short time would place it beyond the reach of danger. Now, many of the parties are ruined, and all are in danger of being so. Their tickets have come out blanks. At the *average* price of England, with a very moderate protection, they could live, and soon they would cease to need protection. At the low prices of England they cannot live.

These changes are natural. It required no more time to mine and smelt the ore, and to roll the iron, in 1825 or 1846, than it did in 1843, and the quantity obtained in return to a given quantity of labor was as great in the one case as in the other. The return to the labor of the farmer is liable to great variation from the character of the seasons, and he may have twenty bushels in one year, while obtaining but ten in the next, but such is not the case with the labor applied to the conversion of ore and coal into iron, or cotton and wool into cloth. In those cases, what can be done on any one day can be done on any other, and that for years in succession, with, of course, gradual increase from the improvement of machinery. The cost, in labor, of food, and of the materials of clothing, and of other raw marerials, is thus liable to changes, but the cost of iron, of cloths and of manufactured commodities generally, tends to remain stationary, except so far as they are subject to change from the greater or less supplies of the raw material in good or bad seasons, and yet the price of iron is as variable as that of food. It goes up to 10 or 12, and down to 4 or 5, and it does this simply because in Europe nothing is permitted to take its natural course. At one time laws for making roads are refused, and iron is cheap. At another, laws are granted by hundreds, and iron is dear. At a third, it is found that speculation has caused roads to be made too fast, and iron is again cheap. From hour to hour the system changes, and universal ruin is the result. The furnace master here has his market destroyed, and if he would not himself be ruined, he must discharge his hands, who are forced to go and join the farmer in raising more wheat, instead of consuming potatoes or cabbages.

Such results are due in a great degree to the fact that the farmer and planter pay *indirectly* for the vast quantities of iron that they consume, and not directly. If the farmer obtained his axes and ploughs, and spades and harrows, and the use of railroad iron, directly from the workers in iron, in his neighborhood, paying them in labor, and in cabbages and potatoes, it would matter little to him what was the price of iron in the general market, as long as he received the same quantity of it for his day's labor, for his bushels of potatoes, his tons of hay, his gallons of milk, or his loads of lumber. He would see at once that the market for those commodities was quite as important to him as could be the market for iron to the owner of the rolling mill, or the market for axes to the maker of axes, and that the only result that could follow from his ceasing to buy from his neighbor, would be that his neighbor would cease to buy from him. Unfortunately for him,

however, the whole system of trade tends to his impoverishment, and he is obliged to look to the people of distant towns and cities to supply him with axes and spades, and to make his roads, all of which they do by aid of the large portion of his products that they retain as their charge for performing for him the work of exchange. With them, the only question is, what is the smallest quantity of money that will purchase the iron with which to make axes, spades or railroads? The money price of iron in England has fallen, and as the city capitalist has neither potatoes nor hay, nor milk, to sell, he buys his iron abroad instead of buying it at home, and the farmer is supplied with axes bought with money abroad, while his potatoes and his turnips rot on his hands at home, and is obliged to give his milk to his hogs, because his neighbor the furnace master has been ruined. He pays for his axes in wheat, of which it takes the produce of three or four acres to puschase as much as would have been paid for by a half an acre of potatoes, and he loses all the manure, and his land and himself are impoverished, and then he flies to the west to seek new lands upon which to repeat the same operation.

The farmer and planter require protection to enable them to bring the loom and the anvil to the side of the plough, and they do so only because the unnatural, and consequently unsteady, system of the trade of the world has tended to drive men to congregate in large manufacturing towns and cities, and to compel both farmer and planter to waste in the work of transportation and exchange a large portion of their time, and a very large portion of their products, and to keep them poor. That protection they will take whenever they shall come fully to understand that the towns and cities of the world are built up at their expense—that they are kept poor by operations that make others rich—and that it is for that reason alone that they are compelled to call upon others to make their roads. With every step in the progress of concentration, by means of bringing the consumer directly to the side of the producer, the necessity for roads diminishes, and the power to make them for themselves increases, as they may readily see if they will travel through New England, or New York, or in the neighborhood of any place where the consumer and producer are fairly established in the neighborhood of each other. The whole manufacturing system of the world at the present time is one of centralization, which always enriches the few at the expense of the many. Concentration will enable the many to grow rich, and will tend to improvement and equality of condition, physical, moral, intellectual and political—but that cannot be obtained so long as the farmer shall be compelled to buy his iron at a distance, while unable to sell his potatoes and his turnips, and the labor of himself and his horses, to the furnace master at home, ruined by the sudden downfall of iron in the market of the world, produced by changes of policy over which neither he nor the farmer could have any control.

If the American press was united, and labored as hard, to promote the greatest good of the people of the country, by imparting to them *useful* information, as the several divisions of it are in traducing their opponents, and the opposing candidates for office, we might, *indeed*, become an intelligent and powerful nation; but so long as the obligations to party over-ride every other duty—and so long as men, who claim to be *honorable*, sacrifice their own opinions—their own self-respect—and the evident and vital interests of the people to their *party*, and to their *party leaders*—truths, such as those contained in this article, will not be as widely disseminated as they ought to be. Yet, as "*truth is mighty*," we have a hope that it will ultimately "prevail," among the laboring masses, and teach them that they have *little* to expect from political demagogues, and time-serving office *seekers*—except to be made "hewers of wood, and drawers of water," for their express benefit;—and therefore we would venture the remark that truth and honesty has more to expect, and less to fear, from a candidate who gives *no pledges*, except to devote himself to the best interests of the country, should he be placed in an important position—than from those who give *such* pledges as they think may promote their aim to obtain office.

It was not our intention, however, when we commenced this article, to give it a political turn—tho' the subject under consideration is one of great political importance. We only designed to call attention to "*The Plough, the Loom and the Anvil*," and to its veteran editor, J. S. SKINNER, Esq, who has labored so long in behalf of the working people of this country, that he is eminently deserving of, and justly entitled to, their *confidence*, *respect* and *liberal support*.

It is published by Henry S. Getz, of this city, and may be had of the principal booksellers throughout the Union, at $3 for *one*, $5 for *two*, and $10 for *five* copies.

Ocean Steam Navigation--American Enterprise.

The following article from the New York Journal of Commerce, of 7th inst., will be read with interest. It is not only true, as the Journal of Commerce says, that "the entire enterprise of *ocean steam navigation* was but recently in British hands, and conducted by British capital," but it would have been *equally* true if it had gone further, and said that it was "*but recently*" that there was *no* "ocean steam navigation;" as we well recollect the arrival of the SIRIUS, with the bold but unfortunate *Roberts*, and, soon after, of the GREAT WESTERN, with the equally intrepid, but *more* unfortunate *Hosken*, on the day when they first made their appearance in the American waters. It is now only about — years since they were thronged by the eagre and curious *thousands* of our citizens, desirous to examine these beautiful steam ships, the first that had ventured "so far from land," as regular traders, and constant visitors to our ports. And now "steam ships" are becoming not only the medium of our growing commerce, but also a principal means of *national* defence.—This is as it *should* be, and its progress during the past few years, together with the extension of *railroads*, and the *magnetic telegraph*, show conclusively to the enquiring and observing mind, what, under a wise, prudent and economical government, we *might* become, in a few years, as a nation. It is a simple question in proportion, viz: if in twenty years, with a population of less than *twelve* millions, we have planed, and introduced, and constructed, more than six thousand miles of railroad—discovered the *magnetic telegraph*, and erected over five thousand miles—and introduced *steam navigation* on the ocean, both as an aid to commerce, and as a means of national defence: what may we not accomplish in the way of improvement, with their aid in addition to the new impetus which they have imparted to the energies of the American people? It is, indeed, difficult to fix boundaries to our progress, or even to imagine a limit to our improvements.

We give the article alluded to entire, and are much obliged to the writer for the opportunity. It is as follows:

The Ship Yards.—E. K. Collins's Mammoth Steam Ships.—The entire enterprise of Ocean steam navigation was but recently in British hands, and conducted by British capital. "Great" was not only written on almost every steamer, but impressed upon every mind; so that, after all that had been said of American skill in naval architecture and seamanship, we seemed about to yield the palm to England without a struggle. But there were a few men among us, possessing the requisite energy and capital, who were ready to make investments in such property. Altho' in a degree unsuccessful at the outset, as experiments are apt to be, the attempt was none the less honorable to them, and now, as the result of persevering effort, the Americans possess, or will soon possess, as fine a fleet of sea going steamers as the world has ever seen. The elegance and convenience of their interior arrangements, the experience and skill of their commanders, and the success of their recent voyages, have determined, or must soon determine the question of equality, if not of superiority in their favor. An honorable, and in every sense beneficial competition has thus been created, to which commerce and science are alike indebted. Would such vessels as the Europa, Niagara, and other English steamers recently built, now be afloat, had not the Ocean steam navigation and other companies in the United States been organised?

In addition to transatlantic navigation, other enterprises are on foot which contemplate the extension of our steam navy to the far south, and the waters of the Pacific. All this has not been accomplished, however, on purely individual resources. In one or two instances the general government has given its aid and encouragement.

The gigantic enterprise in which E. K. Collins is at present engaged, is the most extensive of any of the same character yet undertaken by a single individual in the United States—one in which upwards of $2,500,000 are involved. Mr. C. contemplates the construction of five steamers, of immense size, to ply between this city and Liverpool, and carry the U. S. Mail. Without exception, they will be the largest frame steam vessels ever built. Two of them are now far advanced; one in the yard of Wm. H. Brown, and the other in that of Jacob Bell, and will probably both be launched in November next. Their extreme length is 285 feet, breadth of beam 40 feet, depth of hold 31 feet. They will measure 3000 tons, or about the same as the Great Britain (iron). It is intended that they shall be completed in season to make their first trip in the early part of the fall of 1849. In model, they are unlike any steam

vessel heretofore built, having more floor and sharper ends. They are also without a cut water, and carry no bowsprit. Their frames are all sided, 12 to 14 inches, and floors 21 inches, moulded, filled in solid to the floor heads, and coaged with locust throughout.

One of the most striking features is the style of the fastenings. Fifty tons of iron are worked up into bars for the frame fastenings of each. These are five inches wide and one thick, placed at intervals of four feet obliquely, from stem to stern, and crossing each other diagonally, the intersecting points being rivetted together. The longest of these is 35 feet. This method has not before been introduced in the United States. The ceiling is of pine, 8 inches thick, with the exception of five streeks at the turn of the bilge, which are one foot square and bolted edgewise.—The outside planks are of yellow pine to the main deck, except one streak next to the keel which is of white oak, 15 inches wide and 10 thick, bolted edgewise through the keel with one inch copper. The side planking is also bolted edgewise. Several streaks of wales are 9½ inches thick, and jogged into the timbers 1½ inches. All the fastenings are of copper and locust.

The engine for one of the ships now building, is to be made at the Novelty, and for the Allaire works, and will each cost about $250,000. The cylinders will be 95 inches in diameter, and have a stroke of 9 feet. The cost of these boats will exceed $500,000 each. Five steamers of similar dimensions to the above, will ultimately complete the line, one being a reserve boat. The keels of the third and fourth will be laid upon the launching of the two now in the stocks.

Howard's New Orleans Line.—In Wm. H. Brown's yard, is another fine steamer of 1600 tons, intended to run between N. York and New Orleans, in connection with the Crescent City. She is 228 feet keel, 40 feet beam, and 24 in the hold, and is to be ready to take her place in the line on the 1st of March next. The engines are building at Secor's & Co. Together, they will form a line, which, for efficiency and despatch, will be unequalled. The Crescent City is at present laid up, for the purpose of having her guards raised, the better to fit her for sailing in heavy sea.

The Savannah Line.—An excellent little steamer, called the Pawnee, of about 1200 tons, is constructing in W. H. Webb's yard, for Samuel L. Mitchell's New York and Savannah line, and will be launched this fall. She is 210 feet on deck, 35 feet beam, and 22 deep. The Cherokee is on the same route.

Geo. Law's New York and New Orleans Line.—The second vessel of the line of mail steamers between this city and New Orleans, via Havre, now under contract by G Law, Esq., was launched from the yard of Messrs. Smith & Dixon, yesterday afternoon. Engines building at Secor's.

The Branch to Chagres, from Havana, under the same contractor, will be composed of two small class steamers, the keels of which will probably be laid before long.

Panama and San Francisco Line.—The three vessels composing this line, viz: the Panama, Oregon and California, are now receiving their machinery, etc., and fitting out for their destination. The latter vessel, the pioneer of the line, leaves for the Pacific on the 2d of next month, and the others follow her successively at intervals of one month each. As most are aware, these connect with the vessels last named at the Isthmus of Darien, forming a continuous mail line from this port to the ports of California, and from them to the mouth of the Columbia.

When the whole shall be in operation, say by 1st January next, a passage can be effected from New York to Astoria within thirty days; and if the contemplated line from San Francisco to the Sandwich islands shall be put in operation, it is estimated that a passage from that point to the islands may be made in about eight days.

Some idea of the extent of this department of naval architecture, may be gathered from the following list of steam vessels that have been recently, or are soon to be built in this city.

Charleston packets,	Southerner,	1000
	Northener,	1100
	Washington,	1750
Southampton and Bremen,	Hermann,	1805
	Franklin,	2200
Howland & Aspinwall's Pacific line,	California,	1100
	Oregon,	1200
	Panama,	1100
New York and Savannah,	Cherokee,	1250
	Pawnee,	1200
Howard's N. York and N. Orleans,	Crescent City,	1500
	Empire City,	1600
Havre,	United States,	2000
Law's New Orleans and Chagres branch,	Ohio,	1500
	(mate,)	2706
	Two, unknown.	
Collin's New York and Liverpool line,	not named,	3000
	"	3000
	"	3000
	"	3000

Here we have 22 steamships, whose aggregate tonnage is about 40,000 tons, and in which is, or is to be, invested a capital exceeding nine millions of dollars.

Gold Mines in Canada.

We were not aware that gold mines had been found to any considerable extent in Canada, but the following report of Mr. Cunningham, which we take from the American Mining Journal, shows that valuable mines have been examined by him in the vicinity of Quebec. The editor of that excellent Journal says:

We have received the report of John Cunningham, Esq., on the mineralogical character of the Seigniory of Rigaud Vaudreuil, in the district of Quebec, L. C.

Mr. Cunningham, we believe, was for some years a resident in one of the southern States, and had an opportunity of examining the gold region to which he refers. In comparing the gold deposits in the Carolinas and Virginia, with those of the Seigniory of Rigaud Vaudreuil, he says:

"I can safely assert that the deposit on your Seigniory will bear comparison with many of the richest districts of the south. I have examined many of them and ascertained carefully the results of the washings, and although our operations were conducted upon a very limited scale, being as it were simply an essay, I have no doubt when the mine is regularly opened and a system adopted, that the average proceeds of a year's labor, will fully equal those of the Carolinas or Virginia.

"The gold found is remarkably large and easily collected, and there will consequently be no loss by the process of washing.

"The extent of the deposit is the next important consideration, the limits of which are not yet determined; if the gold exists in the gravel of the country, it will be found where the characteristic formations extend, but if it has originated from some local cause, having an immediate bearing upon the rocks in the vicinity of the stream, the deposit will probably be confined to the country, embraced within the drainage of its tributaries.

"I have found it in variable quantities in the valley of the stream commencing at its outlet, and ascending two miles; and though our principal operations were confined to a very small section, I feel confident the same successful results will obtain wherever the deposit is tried in that distance."

In speaking of further excavations made, and in recommending the manner of working and the number of hands to be employed, Mr. Cunningham says:

"I am, however, much gratified in being able to state, that even above this section, very favorable indications were developed in the bed of the stream, and I entertain no doubt, that a further exploration will bear me out, when I say, that it also is rich in auriferous materials.

"This assertion is made from facts elicited from actual observation, for wherever I have searched in the exposed portions of the stream I found not only indications, but gold of large size, and in considerable quantities, far exceeding any similar experiment which I had seen tried in many of the *richest mines* of the southern States.

"Having had a machine constructed, which is used in all the gold mines of the south, called a 'Burke rocker,' which is a very simple and cheap contrivance, and used with great success in washing for gold, by amalgamation with quicksilver, in order that I might prove the value of the deposit, by a simple calculation, I found the following to result from the gravel and slates washed.

"I would however in the first place state, that with ten men the amount of gravel washed by such a machine, averages from 3 to 350 bushels per day.

"The first gravel tried was from the surface, and about 15 feet above the level of the waters, it yielded 20 pennyweights of gold to 300 bushels of gravel, the last trial was made from the gravel above the slates, with the debris of the slates themselves, this yielded 18 pennyweights, 18 grains of gold from 60 bushels.

"In the deposit mines of the southern states one pennyweight of gold to each hand employed per day, is considered good work, and the mine yielding such results a rich one.—

Their calculation is, if 100 men are employed, they will have five of those machines in operation, these at an average of 300 bushels per day, will give a return of 1 3-35 grains per bushel, or one pennyweight to the hand.

"The average of the washings from our experiments, as given, amounts to 2 7-12 gr. per bushel, being very nearly 100 per cent. more than the mines I have instanced above.

"When you take into consideration the very unfavorable circumstances under which I operated without one experienced hand and almost totally obtructed by water, by which means the material washed could not be taken from where the most favorable indications appeared, you cannot but feel satisfied with the complete success of the exploration.

"It must be borne in mind that the first discoveries made before mine were confined to a small space in the bed of the creek, not more than 40 or 50 ft. square, the gold found amounted to 300 pennyweights, the principal part of which was found in the open crevices of the slates. This yield is unprecedented.

"It has been observed in the opening of the southern mines, that where pieces of 30, 40 or 50 pennyweights have been found, that invariably pieces of much larger weight have followed, you succeeded in finding pieces of the above weights, and there is every reason to suppose the same rule will hold good here as well as elsewhere.

"The largest pieces of gold found by me, were embedded in the crevices of the slates, and very possibly will be so discovered to a great depth as those crevices extend, the breaking up of those slates will therefore be necessary, and to do so, the bed of the creek and the entire valley must be completely freed from water.

"The working season being very short, no time should be lost in collecting the materials for building the dam, and the necessary houses for the men, and offices, provisions also, and tools, etc., ought to be provided, and on the spot, before the opening of the navigation, for at least two months' use, in order that a day may not be lost when the time for working arrives. The amount of these preparations must of course depend upon the number of hands employed.

"The foregoing would be the principal outlay for working this portion of the deposit, and as near as I can estimate it, including machinery, labor, tools, etc., would amount to about £2,000 currency, ($8,000).

"It is generally the conceived opinion, that gold mines are ruinous to the proprietors, and detrimental to all other industrial pursuits, which might be necessary for the furtherance of the prospects of the country within which they are situated. This, I think, experience has proved to be fallacious, much depends upon the method of working the mines, and the necessary prudence in regulating the monetary department of the business, less capital being required in opening them, and the metallurgic process is more simple than that required in the separation or reduction of any other metal.

"A few years ago, the country within which the Russian mines are situated, was a barren waste, now there are cities and villages and a large population, all resulting from the astonishing developments which have arisen there. The same might be said of the southern States, a great portion of the mining region there, was unfitted for any agricultural purpose, but the mines have brought population, settlements have been formed, the aspect of the country has become changed, and everything looks prosperous.

"During the year 1846, $1,139,357 worth of gold was coined at the mint and branches of the United States from the mines of that region—comment on this would be superfluous—and I therefore state without hesitation, that the develpments resulting from this exploration, will perfectly justify you in making even a much greater outlay than I have named, should it be required."

TO MACHINISTS & MANUFACTURERS. The Subscribers have taken the READING CAR AXLE MANUFACTORY—and are prepared to execute orders for *Axles of every description*, and Wrought Iron Shafts for Steamboats, Mills, etc., made from superior material, at short notice. Address *Reading, Pa.*

ANDREW TAYLOR & CO.

August 5, 1848—3m*

RAILROAD IRON—SHEET IRON—BRASIER'S RODS—HOOPS—SCROLL—BANK'S BEST—& OTHER GOOD MAKES OF ENGLISH IRON.

100 Tons Railroad Iron—Staffordshire make—56 pounds per yard—shipped from Liverpool 20th July, expected to land on wharf from 10th to 20th September.

Also have Invoices of Sheet Iron, Brasier's Rods, Hoops, Scroll, and Band Iron, Banks best, and other good makes of English Rolled Iron, to arrive, suitable for Railroad Axles, etc., etc., equal in quality to American Rolled Iron. I have agency of several best makers in England and Wales, and can import for Railroad Companies, and others, on best terms, and at much less prices than they can be supplied from American Mills.

DAVID W. WETMORE,
218 Water street.

New York, Sept. 9, 1848. 6w*

TO CONTRACTORS.

SEALED proposals will be received at the office of the Lafayette and Indianapolis Railroad Co. in Lafayette, until the 11th day of October next, for the Grading, Masonry and Bridging of that part of said road lying between the summit south of Durkee's Run, near Lafayette, and Lebanon, in Boone county, about 34 miles. Also, for the wooden superstructure for the same, in a distinct bid.

Plans and specifications will be exhibited by the engineer. By order of the Board.

ALBERT S. WHITE, Pres't.

Lafayette, Aug. 17, 1848. 6t35

DEAN, PACKARD & MILLS,

MANUFACTURERS OF ALL KINDS OF

RAILROAD CARS,

SUCH AS

PASSENGER, FREIGHT AND CRANK CARS,

— ALSO —

SNOW PLOUGHS AND ENGINE TENDERS OF VARIOUS KINDS.

CAR WHEELS and AXLES fitted and furnished at short notice; also, STEEL SPRINGS of various kinds; and

SHAFTING FOR FACTORIES.

☞ *The above may be had at order at our Car Factory,*

REUEL DEAN,
ELIJAH PACKARD,
ISAAC MILLS,
} SPRINGFIELD, MASS.

1y48

RAILROAD SCALES.—THE ATTENTION of Railroad Companies is particularly requested to Ellicotts' Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of 20 years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT.

Factory, 9th street, near Coates, cor. Melon st.
Office, No. 3 North 5th street,
y25 Philadelphia, Pa.

TO RAILROAD COMPANIES AND MANufacturers of railroad Machinery. The subscribers have for sale Am. and English bar iron, of al. sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside.

THOMAS & EDMUND GEORGE,
a45 N. E. cor. 12th and Market sts., Philad., Pa.

THE NEWCASTLE MANUFACTURING Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention.

ANDREW C. GRAY,
a45 President of the Newcastle Manuf. Co.

LAP—WELDED

WROUGHT IRON TUBES

FOR

TUBULAR BOILERS,

FROM 1 1-2 TO 8 INCHES DIAMETER.

These Tubes are of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER,
Patentee.
28 Platt street, New York

ENGINEERS' AND SURVEYERS' INSTRUMENTS MADE BY

EDMUND DRAPER,

Surviving partner of

STANCLIFFE & DRAPER.

No 23 Pear street, below Walnut,
1y10 near Third, Philadelphia.

DIRECT ACTION ENGINES FOR STEAMBOATS.

THE PATENT DOUBLE CYLINDERS,

AND ALSO

THE ANNULAR RING PISTON ENGINES,

of Messrs. Mauldslay, Sons & Field, of London, may be built in the United States, under license, which can be obtained of their agent,

THOMAS PROSSER, C. E.,
28 Platt street, New York.

May 6, 1848.

WILLIAM JESSOP & SONS,
CELEBRATED CAST-STEEL.

The subscribers have on hand, and are constantly receiving, from their manufactory,

PARK WORKS, SHEFFIELD,

Double Refined Cast Steel—Square, flat & octagon.
Best warranted Cast Steel—Square, flat & octagon.
Best Double and Single Shear Steel—Warranted.
Machinery Steel—Round.
Best and 2d gy. Sheet Steel—for Saws and other purposes.
German Steel—flat and sqr., "W. I. & S." "Eagle" and "Goat" Stamps.
Genuine "Sykes," L Blister Steel.
Best English Blister Steel, etc., etc., etc.

All of which are offered for sale on the most favorable terms, by WM. JESSOP & SONS,
91 John Street, New York.

Also by their Agents—
Curtus & Hand, 47 Commerce St., Philadelphia.
Alex'r Fullerton, & Co., 119 Milk St., Boston.
Stickney & Beatty, South Charles St., Baltimore.

May 6, 1848.

NEW PATENT CAR WHEELS.

THE SUBSCRIBERS ARE NOW MANUfacturing Metallic Plate Wheels of their invention, which are pronounced by those that have used them, a superior article, and the demand for them has met the most sanguine expectations of the inventors. Being made of a superior quality of Charcoal Iron, they are warranted equal to any manufacture.

We would refer Railroad Companies and others to the following roads that have them in use. Hartford and New Haven, Connecticut River Railroad, Housatonic, Harlem, Farmington, and Stonington.

SIZER & CO.
January 29, 1848. tf Springfield, Mass.

INDIA RUBBER RAILROAD SPRINGS.

These springs are now generally acknowledged to be far superior to steel. They are very much lighter—their power is more easily regulated—they are more elastic, and yet possess great strength, and they always retain their elasticity, and are not affected by extremes of cold or heat. The very easy motion which a Car possesses when fitted with these springs is at once perceptable. They are equally applicable to Engines and Tenders.

Railroad and other companies are requested to notice that the Patent for these springs was granted to *W. C. Fuller* by the United States Government, and that any parties vending or using such springs, without his license, infringe upon his Patent, and will be proceeded against for so doing.

G. M. KNEVITT, Agent for the Patentee,
78 Broad St., New York.

July 15, 1848.

TO RAILROAD CONTRACTORS. NASHVILLE AND CHATTANOOGA Railroad. On the 1st of August next Proposals will be received at the Railroad Office in Nashville, for the Graduation and Masonry of Forty Miles of the Nashville and Chattanooga Railroad, comprising a large am't of rock excavation, and *One Tunnel of Seven Hundred Yards in Length.*

CHARLES F. M. GARNETT,
5t27 Chief Engineer.

RAILROAD IRON AND LOCOMOTIVE Tyres imported to order and constantly on hand by A. & G. RALSTON
Mar. 20tf 4 South Front St., Philadelp'a.

MATTEWAN MACHINE WORKS.

THE MATTEWAN COMPANY HAVE added to their Machine Works, an extensive LOCOMOTIVE ENGINE department, and are prepared to execute orders for *Locomotive Engines* of every size and pattern—also, *Tenders, Wheels, Axles,* and other Railroad Machinery, to which they ask the attention of those who wish such articles, before they purchase elsewhere.

STATIONARY ENGINES, BOILERS, ETC. Of any required size or pattern, arranged for driving *Cotton, Woollen,* or *other* Mills, can be had on favorable terms, and at short notice.

COTTON AND WOOLLEN MACHINERY, Of every description, embodying all the modern improvements, second in quality to none in this or any other country, made to order.

MILL GEARING,

Of every description, may be had at short notice, as this company has probably the most extensive assortment of patterns in this line, in any section of the country, and are constantly adding to them.

TOOLS,

Turning Lathes, Slabbing, Planing, Cutting, and *Drilling* Machines, of the most approved patterns, together with all other tools required in machine shops, may be had at the Mattewan Company's Shops, Fishkill Landing, or at

39 Pine Street, New York.
WM. B. LEONARD, *Agent.*

FAIRBANKS' RAILROAD SCALES.

THE Subscribers are prepared to construct at short notice, *Railroad* and *Depot Scales,* of any desired length and capacity. Their long experience as manufacturers—their improvements in the construction of the various modifications, having reference to strength, durability, retention of adjustment, accurracy of weight and despatch in weighing—and the long and severe tests to which their scales have been subjected—combine to ensure for these scales the universal confidence of the public.

No other scales are so extensively used upon Railroads, either in the United States or Great Britain; and the manufacturers refer with confidence to the following in the United States.

Eastern Railroad,	Boston and Maine R. R.,
Providence Railroad,	Providence & Wor. R.R.,
Western Railroad,	Concord R. R.,
Old Colony Railroad,	Fitchburg R. R.,
Schenectady Railroad,	Syracuse and Utica R. R.,
Baltimore & Ohio Road,	Baltimore & Susq. R. R.,
Phila. & Reading Road.	Schuylkill Valley R. R.,
Central (Ga.) Railroad.	Macon and Western R.R.,
New York and Erie Railroad;	

and other principal Railroads in the Western, Middle and Southern States.

E. & F. FAIRBANKS & CO.
St. Johnsbury, Vt.

Agents { FAIRBANKS & Co., 81 Water st. N. York.
A. B. NORRIS, 196 Market st., Philad.

April 22, 1848. 1y*17

PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, *Agent.*

Albany Iron and Nail Works, Troy, N. Y.

The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merriu, New York; J. H. Whitney, do.; E. J. Etting, Philadelphia; Wm. E. Coffin & Co., Boston. ja45

THE SUBSCRIBERS ARE PREPARED TO execute orders at their Phœnix Works for Railroad Iron of any required pattern, equal in quality and finish to the best imported.

REEVES, BUCK & CO.,
Philadelphia.
ROBERT NICHOLS, Agent,
26tf No. 79 Water St., New York.

CHILLED RAILROAD WHEELS.—THE undersigned are now prepared to manufacture their Improved Corrugated Car Wheels, or Wheels with any form of Spokes or Disks, by a new process which prevents all strain on the metal, such as is is produced in all other chilled wheels, by the manner of casting and cooling. By this new method of manufacture, the hubs of all kinds of wheels may be made whole—that is, without dividing them into sections—thus rendering the expense of banding unnecessary; and the wheels subjected to this process will be much stronger than those of the same size and weight, when made in the ordinary way.

A. WHITNEY & SON,
Willow St. below 13th,
Nov. 10, 1847. [tf.] Philadelphia, Penna.

THE SUBSCRIBER has on hand a good assortment of his best Leveling and Surveying Instruments, among them his improved Compass for taking angles without the needle—also Bells, suitable for Churches, Railroad Depots, etc. ANDREW MENEELY.
West Troy, May 12, 1847. 1y*21

PATENT RAILROAD, SHIP AND BOAT Spikes. The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York will be punctually attended to.

HENRY BURDEN, *Agent*

Spikes are kept for sale, at Factory Prices, by & J. Townsend, Albany, and the principal Iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Jarviers, Baltimore; Degrand & Smith, Boston.

*** Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand.

ja45

TO LOCOMOTIVE AND MARINE ENgine Boiler Builders. Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufactured and for sale by

MORRIS TASKER & MORRIS,
Warehouse S. E. corner 3d and Walnut Sts., Philadelphia. 1tf

CHILLED RAILROAD WHEELS.—THE undersigned, the *Original Inventor* of the *Plate Wheel* with solid hub, is prepared to execute all orders for the same, promptly and faithfully, and solicits a share of the patronage for those kind of wheels which are now so much preferred, and which he originally produced after a large expenditure of time and money. A. TIERS.
Point Pleasant Foundry,

He also offers to furnish Rolling Mill Castings, and other Mill Gearing, with promptness, having, he believes, the largest stock of such patterns to be found in the country. A. T.

Kensington, Philadelphia Co., }
March 12, 1848. } 11tf

NORWICH CAR FACTORY,
NORWICH, CONNECTICUT.

AT the head of navigation on the River *Thames*, and on the line of the *Norwich and Worcester Railroad*, established for the manufactory of

RAILROAD CARS,
OF EVERY DESCRIPTION, VIZ:
PASSENGER, FREIGHT AND HAND CARS,
ALSO, VARIOUS KINDS OF
ENGINE TENDERS AND SNOW PLOUGHS.
TRUCKS, WHEELS & AXLES

Furnished and fitted at short notice.
Orders executed with promptness and despatch.
☞ Any communication addressed to
JAMES D. MOWRY,
General Agent,
Norwich, Conn.,
Will meet with immediate attention. 1y8

MANUFACTURE OF PATENT WIRE Rope and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tillers etc., by
JOHN A. ROEBLING, *Civil Engineer,*
Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railrord, has now run 4 seasons, and is still in good condition. 92v1 1y

NICOLL'S PATENT SAFETY SWITCH for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee
G. A. NICOLLS,
ja45 *Reading, Pa.*

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

PASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES

From 4 inches to ¼ in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T's, L's, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER FLUES.

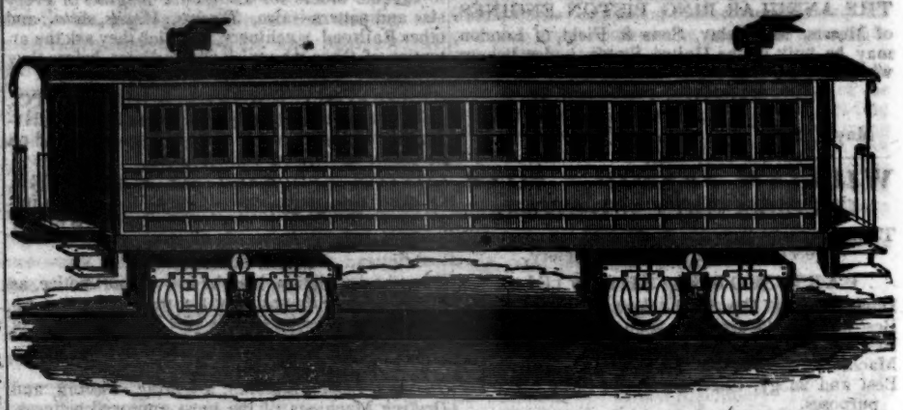
Manufactured and for sale by
MORRIS, TASKER & MORRIS.
Warehouse S. E. Corner of Third & Walnut Streets,
PHILADELPHIA.

LAWRENCE'S ROSENDALE HYDRAULIC CEMENT. This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Flooms and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight paper-en barrels, by JOHN W. LAWRENCE,
142 Front street, New York.

☞ Orders for the above will be received and promptly attended to at this office. 33 1y

DAVENPORT & BRIDGES'
CAR WORKS, CAMBRIDGEPORT, MASS.



Manufacture to Order, Passenger and Freight Cars of every description, and of the most improved pattern; also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices.

All orders punctually executed and forwarded to any part of the country.

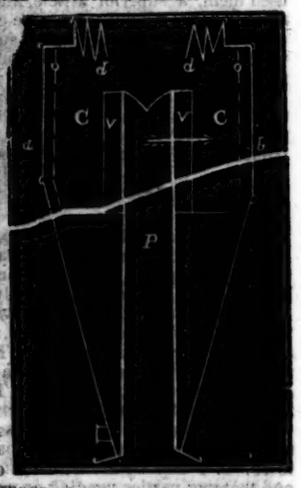
Our Works are within fifteen minutes ride from State street, Boston—Omnibuses pass every fifteen minutes. 10tf

THE SUBSCRIBER IS PREPARED TO execute at the Trenton Iron Works, orders for Railroad Iron of any required pattern, and warranted equal in every respect in point of quality to the best American or imported Rails. Also on hand and made to order, Bar Iron, Braziers' and Wire Rods, etc., etc.
PETER COOPER,
ty10 17 Burling Slip, New York

RAILROAD IRON, PIG IRON, ETC.

600 Tons of T Rail 60 lbs. per yard.
25 Tons of 2½ by ½ Flat Bars.
25 Tons of 2½ by 9-16 Flat Bars.
100 Tons No. 1 Gartshrorie.
100 Tons Welsh Forge Pigs.
For Sale by A. & G. RALSTON & CO.
No. 4 So. Front St., *Philadelphia*

FRENCH AND BAIRD'S PATENT SPARK ARRESTER.



TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved Spark Arrester recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger & freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits

R. L. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendant Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendant Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich; G. B. Fisk, President Long Island Railroad, Brooklyn.

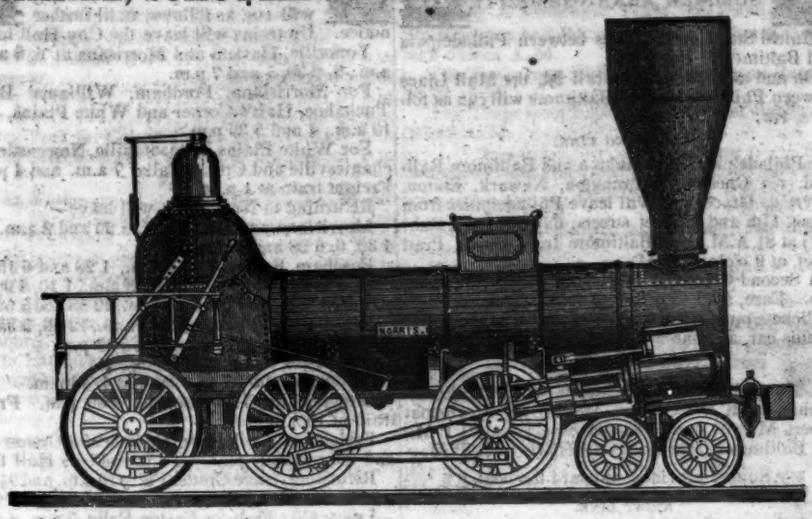
Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city, will be promptly executed.
FRENCH & BAIRD.

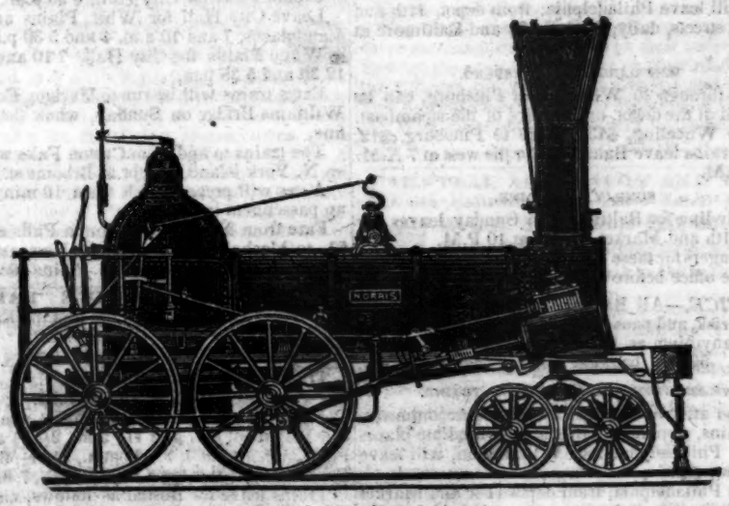
N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.
Philadelphia, Pa., April 6, 1844.

*** The letters in the figures refer to the article given in the *Journal* of June, 1844. ja45

NORRIS' LOCOMOTIVE WORKS.

BUSHHILL, SCHUYLKILL SIXTH-ST., PHILADELPHIA,





THE UNDERSIGNED Manufacture to order Locomotive Steam Engines of any plan or size.

Their shops being enlarged, and their arrangements considerably extended to facilitate the speedy execution of work in this branch, they can offer to Railway Companies unusual advantages for prompt delivery of Machinery of superior workmanship and finish.

Connected with the Locomotive business, they are also prepared to furnish, at short notice, Chilled Wheels for Cars of superior quality.

Iron and Brass castings, Axles, etc., fitted up complete with Trucks or otherwise.

NORRIS' BROTHERS.

MACHINE WORKS OF ROGERS, Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed beinglarge, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery

of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,
Paterson, N. J., or 60 Wall street, N. York.

PIG AND BLOOM IRON.—THE SUBSCRIbers are agents for the sale of numerous brands of Charcoal and Anthracite Pig Iron, suitable for Machinery, Railroad Wheels, Chains, Hollowware, etc. Also several brands of the best Puddling Iron, Juniatta Blooms suitable for Wire, Boiler Plate, Axe Iron, Shovels, etc. The attention of those engaged in the manufacture of Iron is solicited by

A. WRIGHT & NEPHEW,
12tf Vine St. Wharf, Philadelphia.

T. & C. WASON, Manufacturers of every style of Freight and Baggage Cars.—Forty rods east of the depot, Springfield, Mass.

Running parts in sets complete, Wheels, Axles, or any part of cars furnished and fitted up at short notice and in the best manner.

N.B. Particular attention paidto the manufacture of the *most improved* Freight Cars. We refer to the New Haven, Hartford and Springfield; Connecticut River; Harlem; Housatonic, and Western, Mass., Railroads, where our cars are now in constant use.

Dec.25,1847.—1y.

SPRING STEEL FOR LOCOMOTIVES, Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1¼ to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, *Agent*,
1y Albany Iron and Nail Works,

IMPORTANT TO ENGINEERS, CONtractors, and Surveyors.—The Engineer's, Contractor's and Surveyor's Pocket Table Book, by J. M. Scribner, A. M., 264 pages, 24 mo; tuck binding, with gilt edge. Published by Huntington & Savage, 216 Pearl street, New York.

The above work comprises Logarithms of Numbers, Logarithmic Sines and Tangents, Natural Sines and Natural Tangents; the Traverse Table, and a full and extensive set of tables, *exhibiting at one view the number of cubic yards contained in any embankment or cutting, and for any base or slope of sides usual in practice.* Besides these essential tables, the work comprises 50 pages more of Mensuration, Tables, Weights of Iron, Strength of Materials, Formulas, Diagrams, etc., for laying out railroads, canals and curves; much of which has never before been offered to the public, and all dispensable to the engineer. This book will prove a great saving of time, and will enable the new beginner to furnish results as accurately (and with much greater rapidity) as the most experienced in the profession without its aid. The tables of Logarithms, etc., have been carefully corrected and compared with *different* editions of the same tables; and *all* the tables throughout the book have been read carefully by proofs four times; hence the most implicit confidence may be placed in their correctness.

Also, *Scribner's Engineer's and Mechanic's Companion*, new edition, 264 pages, enlarged, with 35 pages of entirely new matter, and much improved throughout.

It is believed these books are so well adapted to suit the above professions, that they cannot *afford* to do without them, and that they will aid in rewarding well directed mental labor.

Both are for sale by all the principal booksellers throughout the United States and Canada.

WESTERN RAILROAD.—ON AND AFter Monday, April 5, 1847, the passenger

trains will leave daily, Sundays excepted, as follows:

Boston at 8 a. m. and 4 p. m. for Albany.

Albany at 7 1-4 a. m. and 5 p. m. for Boston.

Springfield at 8 1-2 a. m. and 1 p. m. for Albany

Springfield at 8 1-2 a. m. and 1 1-2 and 3 p. m. (or on arrival of the train from New York) for Boston.

Day line to New York, via Springfield.—The steamboat train leaves Boston at 6 a. m., and arrives in New York at 7 p. m., by the steamboats Traveller, New York, or Champion. Returning, leaves New York at 6 1-4 a. m., and arrives in Boston at 7 p. m.

Night line to New York.—Leaves Boston at m., and arrives in New York at 5 a. m.

Albany and Troy.—Leave Boston at 8 a. m., Springfield at 1 p. m., and arrive in Albany at 6 p. m.; or, leave Boston at 4 p.m., Springfield next morning at 8 1-2, and arrive in Albany at 1 1-2 p.m.

The Troy trains connect at Greenbush.

The trains for Buffalo leave at 7½ a.m. and 7 p.m.

For Northampton, Greenfield, etc.—The trains of the Connecticut River Railroad leave Springfield at 8 1-4 a.m., 1 and 3 p.m., and passengers proceed directly on to Brattleboro', Windsor, Bellows Falls, Walpole, Hanover, Haverhill, etc.

For Hartford.—The trains leave Springfield on the arrival of the trains from Boston.

The trains of Pittsfield and North Adams Railroad leave Pittsfield on the arrival of the trains from Boston.

N. B.—No responsibility assumed for any baggage by the passenger trains, except for wearing apparel not exceeding the value of fifty dollars, unless by special agreement.

JAMES BARNES, Sup't and Eng'r.
C A. SEAD, Agent, 27 State street, Boston.

GEORGIA RAILROAD. FROM AUGUSTA to ATLANTA—171 MILES.

AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO DALTON, 100 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 408 miles in length, from Charleston to Dalton (Cross Plains) in Murray county, Ga.—32 miles from Chattanooga, Tenn.

RATES OF FREIGHT.		Between Augusta and Dalton. 271 miles.	Between Charleston, and Dalton. 408 miles.
1st class.	Boxes of Hats, Bonnets, and Furnature, per cubic foot	$0 18	$0 28
2d class.	Boxes and Bales of Dry Goods, Sadlery, Glass, Paints, Drugs and Confectionary, per 100 lbs.	1 00	1 50
3d class.	Sugar, Coffee, Liquor, Bagging, Rope, Cotton Yarns, Tobacco, Leather, Hides, Copper, Tin, Feathers, Sheet Iron, Hollow Ware, Castings, Crockery, etc.	0 60	0 85
4th class.	Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Bar Iron, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc	0 40	0 65
	Cotton, per 100 lbs	0 45	0 70
	Molasses, per hogshead	8 50	13 50
	" " barrel	2 50	4 25
	Salt per bushel	0 18	
	Salt per Liverpool sack	0 65	
	Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows	0 75	1 50

German or other emigrtants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight payable at Dalton.

F. C. ARMS,
Sup't. of Transportation.

Augusta, Ga., July 15, 1847. 44•1v

THE WESTERN AND ATLANTIC

Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Rail road.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tuscumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,
Chief Engineer..

Atlanta, Georgia, April 16th, 1846 1v1

CENTRAL RAILROAD—FROM SAVANnah to Macon. Distance 190 miles.

This Road is open for the transportation of Passengers and Freight. Rates of Passage, $8 00. Freight—

On weight goods generally... 50 cts. per hundred.
On measurement goods ..... 13 cts. per cubic ft.
On brls. wet (except molasses and oil) ..... $1 50 per barrel.
On brls. dry (except lime) ... 80 cts. per barrel.
On iron in pigs or bars, castings for mills, and unboxed machinery ..... 40 cts. per hundred
On hhds. and pipes of liquor, not over 120 gallons ..... $5 00 per hhd.
On molasses and oil ..... $6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded free of commission. THOMAS PURSE,
y40 Gen'l. Sup't. Transportation.

PHILADELPHIA, WILMINGTON & BALTIMORE RAILROAD.—1848.

SUMMER ARRANGEMENT.

United States Mail Lines between Philadelphia and Baltimore. Fare, $3.

On and after Monday, April 3d, the Mail Lines between Philadelphia and Baltimore will run as follows, viz:

MORNING LINE.

Per Philadelphia, Wilmington and Baltimore Railroad, via Chester, Wilmington, Newark, Elkton, Havre de Grace, etc., will leave Philadelphia, from Depot, 11th and Market streets, daily (except Sunday) at 8½ A.M., and Baltimore from Depot, Pratt street, at 9 o'clock, A.M.

A Second Class Car will be run with the morning line. Fare, $2.

Tickets must positively be procured at the Office for this car, as none will be sold by the conductors.

AFTERNOON LINE.

Via Newcastle and Frenchtown, will leave Philadelphia, from Dock Street Wharf, per Steamboat Robert Morris, daily (except Sunday) at 2½ P.M., and Baltimore, from Bowly's Wharf, at 2½ P.M.—

☞ Supper provided on board the boat. ☜

NIGHT LINE.

Per Philadelphia, Wilmington and Baltimore Railroad, will leave Philadelphia, from depot, 11th and Market streets, daily, at 11 P.M., and Baltimore at 8 P.M.

WHEELING AND PITTSBURG.

Tickets through to Wheeling or Pittsburg, can be procured at the depot, or on board of the steamboat. Fare to Wheeling, $13. Fare to Pittsburg, $12.

The trains leave Baltimore for the west at 7 A.M. and 4 P.M.

SUNDAY MAIL LINE.

The only line for Baltimore on Sunday leaves the depot, 11th and Market streets, at 10 P.M.

Passengers for these lines must procure their Tickets at the office before taking their seats in the cars.

NOTICE.—All Baggage by these lines is at its owner's risk, and passengers are expressly prohibited taking anything as baggage, except their wearing apparel, 50 lbs. baggage allowed each passenger.

WILMINGTON ACCOMMODATION TRAINS.

On and after Monday, April 3d, the Accommodation Trains, stopping at all the intermndiate places between Philadelphia and Wilmington, will leave as follows, viz:

Leave Philadelphia, from depot 11th and Market streets, daily (Sundays excepted) at 1½ and 4 P. M.

Leave Wilmington, from the depot, Water street, daily (except Sunday) at 7½ A.M. and 4½ P.M.

The Freight Accommodation Train will leave Philadelphia at 7 P.M. and Wilmington at 7 P.M.

The Mail Trains stopping at Chester and Wilminton, leave Philadelphia at 8½ A.M. and 10 P.M. Wilmington at 1 o'clock, P.M., and 12 midnight.

Fare to Wilmington, 50 cts. Fare to Chester, 25 cts.

G. H. HUDDELL, *Agent.*

March 23, 1848. 1y15

☞ NOTICE. ☜

RAILROAD LINE BETWEEN ALBANY AND BUFFALO, N. Y.

1848.—SCHEDULE FOR RUNNING.—1848.

Going west.		1st train.	2d train.	3d train
Leaves	Albany	7½ A.M.	2 P.M.	7 P.M.
Pass	Utica	1 P.M.	7½ P.M.	1½ A.M.
Pass	Syracuse	4½ P.M.	11 P.M.	5 A.M.
Pass	Auburn	6½ P.M.	1 A.M.	7 A.M.
Pass	Rochester	12½ M.N.	7 A.M.	1 P.M.
Arrives at.	Buffalo	5½ A.M.	12 M.	6 P.M.

Going east.		1st train.	2d train.	3d train.
Leaves	Buffalo	7½ A.M.	2 P.M.	7 P.M.
Pass	Rochester	12½ M.	7 P.M.	12 M.N.
Pass	Auburn	6½ P.M.	1 A.M.	6 A.M.
Pass	Syracuse	8½ P.M.	3½ A.M.	8 A.M.
Pass	Utica	12 M.N.	7 A.M.	11½ A.M.
Arrives at.	Albany	5 A.M.	12 M.	4½ P.M.

Adopted February 18, 1848, in convention at Albany. (Copy.)

T. Y. HOWE, Jr.,
Secretary of the Convention.

NEW YORK & HARLEM RAILROAD

CO.—Summer Arrangement.—On and after Tuesday, June 1st, 1847, the cars will run as follows, until further notice. Up trains will leave the City Hall for—

Yorkville, Harlem and Morrisana at 6, 8 and 11 a.m., 2, 2 30, 5 and 7 p.m.

For Morrisiana, Fordham, Williams' Bridge, Tuckahoe, Hart's Corner and White Plains, 7 and 10 a.m., 4 and 5 30 p.m.

For White Plains, Pleasantville, Newcastle, Mechanicsville and Croton Falls, 7 a.m. and 4 p.m. Freight train at 1 p.m.

Returning to New York, will leave—

Morrisiana and Harlem, 7, 8 20 and 9 a.m., 1, 3, 4 30, 6, 6 28 and 8 p.m.

Fordham, 8 08 and 9 15 a.m., 1 20 and 6 15 p.m.

Williams Bridge, 8 and 9 08 a.m., 1 10, 6 08 p.m.

Tuckahoe, 7 38 and 8 25 a.m., 12 55 and 5 52 p.m.

White Plains, 7 10 and 8 35 a.m., 12 50, 5 35 p.m.

Pleasantville, 8 15 a.m. and 5 15 p.m.

Newcastle, 8 a.m. and 5 p.m.

Mechanicsville, 7 48 a.m, and 4. 48 p.m.

Croton Falls, 7 30 a.m. and 4 30 p.m. Freight train at 10 a.m.

Freight train will leave 32d street for Croton Falls and intermediate places, 4 a.m and City Hall 1 p.m.

Returning, leave Croton Falls 10 a.m. and 9½ p.m.

ON SUNDAYS, the trains will run as follows:

Leave City Hall for Croton Falls, 7 a.m, 4 p.m.

Croton Falls for City Hall, 7 30 a.m., 4 30 p.m.

Leave City Hall for White Plains and intermediate places, 7 and 10 a.m. 4 and 5 30 p.m.

White Plains for City Hall, 7 10 and 8 35 a.m., 12 30 and 5 35 p.m.

Extra trains will be run to Harlem, Fordham and Williams Bridge on Sunday, when the weather is fine.

The trains to and from Croton Falls will not stop on N. York island, except at Broome st. and 32d st.

A car will preceed each train 10 minutes to take up passengers in the city.

Fare from New York to Croton Falls and Somers $1, to Mechanicsville 87½c., to Newcastle 75c., to Pleasantville 62½c. to White Plains 50c. 25tf

BOSTON AND MAINE RAILROAD.

Upper Route, to Portland and the East.

Summer Arrangement.

Commencing July 3d, 1848.

Trains leave Boston as follows, viz:

For Portland at 7 A.M. and 2½ P.M.

For Great Falls at 7 a.m., 2½ and 4½ p.m.

For Haverhill at 7 and 11½ a.m., 2½, 4½ and 6 p.m.

For Lawrence, at 7, 9, 11½ a.m., 2½, 4½, 6, 7 p.m.

For Reading 7, 9 & 11½ a.m., 2½, 4½, 6, 7, 8½ & 10 p.m

Trains leave for Boston as follows, viz:

From Portland at 7½ a.m., and 3 p.m.

From Great Falls at 6½ and 9½ a.m., and 4½ p.m.

From Haverhill at 7, 8½ and 11 a.m., 3½ and 6½ p.m.

Lawrence at 6½, 7½, 8½, 11½ a.m., 12½, 3½, 6½, p.m.

Reading at 6, 6½, 7½, 9½, 11½ a.m., 1, 4, 7½, 9, 10 p.m.

MEDFORD BRANCH TRAINS.

From Boston at 6·50, 9½ a.m., 12½ 2½, 5½, 7, 10 p.m.

From Medford at 6·10, 7½, 10½, a.m., 2, 4, 6½, 9½ p.m.

STEAMBOAT TRAINS.

For BANGOR, every Monday, Wednesday and Friday, at 5 p.m.

For HALLOWELL, every Tuesday, Thursday & Saturday, at 7 a.m.

The Depot in Boston is on Haymarket Square.

CHAS. MINOT, *Super't.*

Boston, July 3d, 1848.

BOSTON AND PROVIDENCE RAIL-

road. Summer Arrangement. On and after Monday, April 3, 1848, the Trains will run as follows:

Steamboat Train—Leaves Boston daily, except Sunday, at 5 o'clock p.m.

Accommodation Trains—Leave Boston at 7 and 11 a.m. and 4 p.m., and Providence at 7½ and 11 a.m. and 4½ p.m.

Pawtucket Train—Leaves Boston at 4 p.m. and Pawtucket at 7, 10 a.m.

Dedham Trains—Leave Boston at 8 a.m., and 12½ 3½, 6½ and 9 p.m. Leave Dedham at 7 and 9½ a.m. and 2½, 5½ and 8 p.m.

Stoughton Trains—Leave Boston at 11½ a.m. and 5½ p.m. Leave Stoughton at 7, 10 a.m. and 3½ p.m.

WM. RAYMOND LEE, *Sup't.*

BALTIMORE AND SUSQUEHANNA Railroad.—Reduction of Fare. Morning and Afternoon Trains between Baltimore and York.—The Passenger trains run daily, except Sunday, as follows:

Leaves Baltimore at.....9 a.m. and 3½ p.m.
Arrives at.....9 a.m. and 6½ p.m.
Leaves York at.....5 a.m. and 3 p.m.
Arrives at.....12½ p.m. and 8 p.m.
Leaves York for Columbia at..1½ p.m. and 8 a.m.
Leaves Columbia for York at..8 a.m. and 2 p.m.

FARE.

Fare to York.....$1 50
" Wrightsville.....2 00
" Columbia.....2 12½
Way points in proportion.

PITTSBURG, GETTYSBURG AND HARRISBURG.

Through tickets to Pittsburg via stage to Harrisburg.....$9
Or via Lancaster by railroad.....10
Through tickets to Harrisburg or Gettysburg..3
In connection with the afternoon train at 3½ o'clock, a horse car is run to Green Spring and Owing's Mill, arriving at the Mills at.....5½ p.m.
Returning, leaves Owing's Mills at.....7 a.m.

D. C. H. BORDLEY, *Sup't.*
31 1y Ticket Office, 63 North st.

BALTIMORE AND OHIO RAILROAD. MAIN STEM. The Train carrying the Great Western Mail leaves Baltimore every morning at 7½ and Cumberland at 8 o'clock, passing Ellicott's Mills, Frederick, Harpers Ferry, Martinsburgh and Hancock, connecting daily each way with—the Washington Trains at the Relay House seven miles from Baltimore, with the Winchester Trains at Harpers Ferry—with the various railroad and steamboat lines between Baltimore and Philadelphia and with the lines of Post Coaches between Cumberland and Wheeling and the fine Steamboats on the Monongahela Slack Water between Brownsville and Pittsburgh. Time of arrival at both Cumberland and Baltimore 5½ P. M. Fare between those points $7, and 4 cents per mile for less distances. Fare through to Wheeling $11 and time about 36 hours, to Pittsburgh $10, and time about 32 hours. Through tickets from Philadelphia to Wheeling $13, to Pittsburgh $12 Extra train daily except Sundays from Baltimore to Frederick at 4 P. M., and from Frederick to Baltimore at 8 A. M.

WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5½ P. M from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare $1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances. s13y1

NORWICH AND WORCESTER RAILROAD. Summer Arrangement.—1848.

Accommodation Trains daily, (Sundays excepted.)

Leave Norwich, at 6 a. m., 12 m. and 5 p. m.
Leave Worcester, at 6½ and 10 a. m., and 4½ p. m. connecting with the trains of the Boston and Worcester and Providence and Worcester railroads.

New York & Boston Line. Railroad & Steamers. Leave New York and Boston, daily, Sundays excepted, at 5 p.m.—At New York from pier No. 1 N. River.—At Boston from corner Lincoln and Beach streets, opposite United States Hotel. The steamboat train stops only at Framingham, Worcester, Danielsonville and Norwich.

Freight Trains leave Norwich and Worcester daily, Sundays excepted.—From Worcester at 6½ a. m., from Norwich at 7 a.m.

☞ *Fares are Less when paid for Tickets than when paid in the Cars.* ☜
32 1y S. H. P. LEE, Jr., Sup't.

RAILROAD IRON—2500 TONS HEAVY H Rail, now landing, and expected shortly to arrive, for sale on most favorable terms by

DAVIS BROOKS & CO.
July 19th, tf 68 Broad street, New York.

PHILADELPHIA AND READING RAILROAD.—Passenger Train Arrangement for

1848.

A Passenger Train will leave Philadelphia and Pottsville daily, except Sundays, at 9 o'clock A. M.

The Train from Philadelphia arrives at Reading at 12 18 M.

The Train from Pottsville arrives at Reading at 10 43 A. M.

Fares.	Miles.	No. 1.	No. 2.
Between Phila. and Pottsville,	92	$3·50 and	$3·00
" " Reading,	58	2·25 and	1·90
" Pottsville "	34	1·40 and	1·20

Five minutes allowed at Reading; and three at other way stations.

Passenger Depot in Philadelphia corner of Broad and Vine streets. 8tf

SOUTH CAROLINA RAILROAD.—A Passenger Train runs daily from Charleston, on the arrival of the boats from Wilmington, N. C., in connection with trains on the Georgia, and Western and Atlantic Railroads—and by stage lines and steamers connects with the Montgomery and West Point, and the Tuscumbia Railroad in N. Alabama.

Fare through from Charleston to Montgomery daily.....$26 50
Fare through from Charleston to Huntsville, Decatur and Tuscumbia.....22 00

The South Carolina Railroad Co. engage to receive merchandize consigned to their order, and to forward the same to any point on their road: and to the different stations on the Georgia and Western and Atlantic railroad; and to Montgomery, Ala., by the West Point and Montgomery Railroad.

r25 JOHN KING, Jr, *Agent.*

CENTRAL AND MACON AND WESTern Railroads, Ga.—These Roads with the Western and Atlantic Railroad of the State of Georgia, form a continuous line from Savannah to Oothcaloga, Ga., of 371 miles, viz:

	Miles.
Savannah to Macon—Central Railroad	190
Macon to Atlanta—Macon and Western	101
Atlanta to Oothcaloga—Western and Atlantic	80

Goods will be carried from Savannah to Atlanta and Oothcaloga, at the following rates, viz:

	To Atlanta.	To Oothcaloga.
On Weight Goods—Sugar, Coffee, Liquor, Bagging, Rope, Butter, Cheese, Tobacco, Leather, Hides, Cotton Yarns, Copper, Tin, Bar & Sheet Iron, Hollow Ware & Castings	$0 50	$0 75
Flour, Rice, Bacon in Casks or boxes, Pork, Beef, Fish, Lard, Tallow, Beeswax, Mill Gearing, Pig Iron and Grind Stones	0 50	0 62½
On Measurement Goods—Boxes of Hats, Bonnets and Furniture, per cubic foot	0 20	0 26
Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per cubic foot	0 20	pr. 100 lbs. 35
Crockery, per cubic foot	0 15	" " 35
Molasses and Oil, per hhd., (smaller casks in proportion).	9 00	12 50
Ploughs, (large,) Cultivators, Corn Shellers, and Straw Cutters, each	1 25	1 50
Ploughs, (small,) and Wheelbarrows	0 80	1 05
Salt, per Liverpool Sack	0 70	0 95

Passage—Savannah to Atlanta, $10; Children, under 12 years of age, half price,
Savannah to Macon, $7.

☞ Goods consigned to the subscriber will be forwarded free of Commissions.

☞ Freight may be paid at Savannah, Atlanta or Oothcaloga.

F. WINTER, *Forwarding Agent, C. R. R.*
Savannah, Aug. 15th, 1846. 1y34

NEW YORK ANDERIE RAILROAD LINE. SUMMER ARRANGEMENT. For passengers, twice each way daily, (except Sunday,) leave New York from the foot of Duane St. at 7 o'clock, A. M. and at 4 o'clock, P. M. by steamboat, for Piermont, thence by cars to Ramapo, Monroe, Chester, Goshen, Middletown, Otisville, and the intermediate stations.

The return trains for New York will leave Otisville at 6 30, A. M. and 4 15, P. M.; Middletown at 7 A. M. and 4 40, P. M.; Goshen at 7 22, A. M. and 5 3, P. M.; Chester at 7 35, A. M. and 5 18, P. M.

Fare between New York and Otisville, $1 50; way-fare in proportion.

FOR MILK—Leave Otisville at 5½ o'clock, morning and evening.

FOR FREIGHT—The barges "Samuel Marsh and "Henry Suydam, Jr." will leave New York (from the foot of Duane St.) at 5 o'clock, P. M. daily (except Sundays.)

No freight will be received in New York after 5 o'clock, P. M.

Freight for New York will be taken by the trains leaving Otisville at 10½ o'clock, A. M.; Middletown at 11½, A. M.; Goshen at 12½, P. M.; Chester at 1 o'clock, P. M., etc., etc.

For farther particulars, apply to J. F. CLARKSON, Agent, corner of Duane and West Sts., New York, or to S. S. POST, Superintendent Transportation, Piermont.

24tf H. C. SEYMOUR, Sup't.

LITTLE MIAMI RAILROAD COMPANY. Fall and Winter Arrangement, 1847. On and after Monday, September 20th, until further notice, a Passenger train will run as follows:

Leave Cincinnati daily at 9 A. M., for Milford, Foster's Crossing, Deerfield, Morrow, Fort Ancient, Freeport, Waynesville, Spring Valley, Xenia, Yellow Springs, and Springfield. Returning, will leave Springfield at 4½ a.m. Upward train arrives at Springfield at 2½ p.m. Downward train arrives at Cincinnati at 10½ a.m.

Freight trains will run each way daily.

Messrs. Neil, Moore & Co. are running the following stage lines in connection with the road:

A daily line from Xenia to Columbus and Wheeling, carrying the great Eastern mail.

Daily lines from Springfield to Columbus, Zanesville and Wheeling. Also to Urbana and Bellefontaine.

A line of Hacks runs daily in connection with the train between Deerfield and Lebanon.

Passengers leaving for New York and Boston, arrive at Sandusky city via Urbana, Bellefontaine & the Mad River and Lake Erie railroad, in 27 hours, including several hours' sleep at Bellefontaine. To the same point via Columbus, Delaware, Mansfield and the Mansfield and Sandusky city railroad, is 32 hours. Distance from Cincinnati to Springfield by railroad.....84 miles.
From Springfield to Bellefontaine by stage, over a good Summer road.....32 "
From Bellefontaine to Sandusky city by railroad.....102 "

FARE—From Cincinnati to Lebanon....$1 00
" " " Xenia..... 1 50
" " " Springfield.. 2 00
" " " Columbus... 4 00
" " " Sandusky city 7 00

The Passenger trains runs in connection with Strader & Gorman's line of Mail Packets to Louisville.

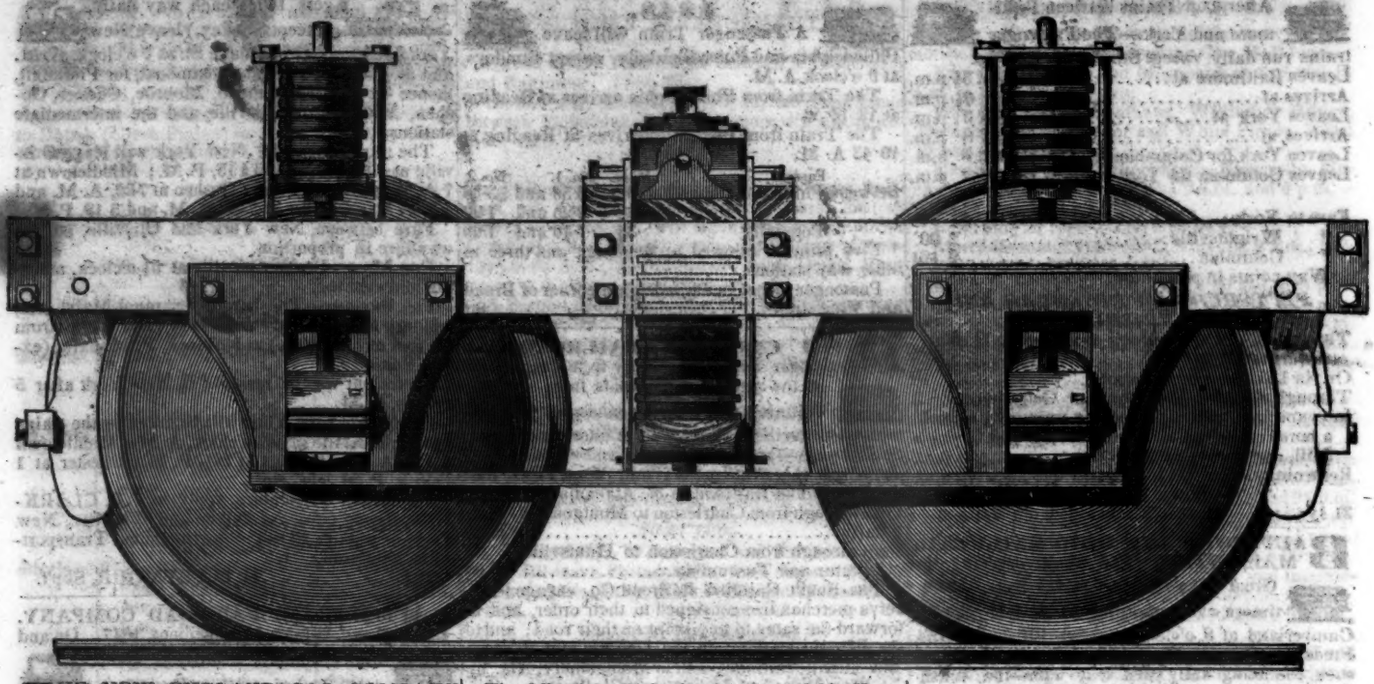
Tickets can be procured at the Broadway Hotel, Dennison House, or at the Depot of the Company on East Front street.

Further information and through tickets for the Stage lines, may be procured at P. Campbell, Agent on Front street, near Broadway.

The company will not be responsible for baggage beyond 50 dollars in value, unless the same is returned to the conductor or agent, and freight paid at of a passage for every $500 in value over that amount.

47tf W. H. CLEMENT, *Sup't.*

VULCANIZED INDIA RUBBER CAR SPRINGS.



THE NEW ENGLAND CAR COMPANY have introduced these Springs, and they are now in operation on every Railroad terminating in Boston, and several others in New England and the Middle States. Their qualities are well understood, or may be readily ascertained by every person interested to know them. They require no recommendation from the Company. The only known compound of India Rubber good for anything for this purpose is the Vulcanized India Rubber, invented by Charles Goodyear, of New Haven, and the application of it, and the form in which it is used, were invented by F. M. Ray, of New York. The right to manufacture and sell the substance itself for the purpose of Railroad Carriage Springs, as well as the form and application of it, are held exclusively by the New England Car Company. No other company, or individual, has any right to sell or use it for such purpose, or has attempted so to use it in this country.

The New England Car Company guarantee the right to use the article they sell for Railroad Carriage Springs only, against all adverse rights, whether under patents or otherwise: and all persons and corporations are cautioned against a similar use of the article, when purchased of any other parties.

The Springs they sell are all manufactured in a uniform manner, and under the immediate inspection of their own Agent, and have been proved and known to answer the purpose. None have been manufactured in this country or imported from abroad beside their own, which would at all answer the purpose; and if any such should be produced, it cannot be used for Car Springs, while Goodyear's patents, and the rights of the New England Car Company under them, remain in force.

The New England Car Company are now prepared to answer orders for all that may be called for, on reasonable notice, and uniform and equitable terms. They invite the most careful examination, and the severest scrutiny, into the merits of their Springs, wherever they have applied them. And if after such examination, your Company should judge it for their interest to adopt them, the N. E. Car Company would respectfully invite the patronage which they think they deserve, and are confident of receiving at your hands.

EDWARD CRANE, *Agent*,
Office 99 State street.

Orders may also be left with WM. RIDER & BROTHERS, No. 58 Liberty street, New York, or with F. M. RAY, *Agent*,
100 Broadway, N. Y.

The following article, from the pen of Mr HALE, the president of the Boston and Worcester railroad, expresses his opinion of this important improvement, as published in the Boston Daily Advertiser of June 7, 1848. He says:

"Of the numerous uses to which the wonderful elasticity and durability of India Rubber renders this material applicable, we are hardly aware of one in which it has been more successful than in forming springs for railroad cars. We have had occasion to observe, for some months past, its application to this use, on one of the passenger cars on the Newton special train of the Boston and Worcester railroad. It is there used, not only for the springs on which the car rests, but for the springs attached to the draw bar at each end of the car, to prevent any jar on the sudden advancement or interruption of the motion of the car. For both these purposes it appears to be admirably adapted, and we do not learn, that during the period in which it has been used, any defect in it has been discovered. It renders the movements of the car extremely easy, and protects it more effectually, we think, than any other spring which we have ever seen in use, from every harsh or unpleasant motion, either vertical or horizontal. It is simple in its form and application, extremely light, and little liable to get out of repair. During the period of some months, in which we have seen the springs in operation, there is no apparent wear or diminution of their efficiency."

The above statement of Mr. Hale agrees with my own observation in all particulars.

WM. PARKER, Supt. B. & W. R. R.
June 8, 1848.

I fully concur in the foregoing statement, from practical observation of its use for the last 5 months, on the Boston and Worcester railroad corporation cars.

D. N. PICKERING, Jr.,
Supt. Car Building B. & W. R. R.
Boston, June 10, 1848.

The New England Car Company have introduced their Vulcanized India Rubber Car Springs on the roads with which we are respectively connected, and we fully concur with Mr. Hale in the above opinion of their character and properties.

DAVENPORT & BRIDGES, Car Builders.
BRADLEY & RICE, Car Builders.
Boston, June, 1848.

LAP-WELDED WROUGHT IRON TUBES for Tubular Boilers, from 1¼ to 15 inches diameter, and any length not exceeding 17 feet—manufactured by the Caledonian Tube Company, Glasgow, and for sale by

IRVING VAN WART,
12 Platt street, New York.
JOB CUTLER, Patentee.

These Tubes are extensively used by the British Government, and by the principal Engineers and Steam Marine and Railway Companies in the Kingdom. 28tf

---

AMERICAN RAILROAD JOURNAL.
OFFICE AT 48 SOUTH THIRD STREET,
(Below Chestnut Street,)
PHILADELPHIA, PA.

This is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

TERMS.—Five Dollars a year, *in advance*.

RATES OF ADVERTISING.

One page per annum	$125 00
One column "	50 00
One square "	15 00
One page per month	20 00
One column "	8 00
One square "	2 50
One page, single insertion	8 00
One column " "	3 00
One square " "	1 00
Professional notices per annum	5

☞ LETTERS and COMMUNICATIONS for this Journal may be directed to the *Editor*,
D. K. MINOR.